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REPORT ON THIRD ANNUAL

SQUAW BUTTE CONFERENCE

SEPTEMBER 6 to 20, 1951

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UNITED STATES

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Report on

THIRD ANNUAL SQUAW BUTTE CONFERENCE

Held at the

Squaw Butte Range and Livestock
Experiment Station

near Burns, Oregon

September 6 to 20, 1951

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Cover photograph by Edward D. Cox, showing participants at 1951 Conference.

Seated, l to r: Malencik, Bauman, Main, Booker, Kephart, Bruins, French, Calabra, Ter Bush, Clawson, Sharrer.
Second row : Henriques, Penny, Rush, March, Genaux, Tyrrell, Miller, Seiser, Pearson, Healy.
Standing : Morgan, Bridge, Lieberman, Bell, Pate, Hall, Allen, Heath, Pope, Rathner, Casey, Norris, Olswold.

INTRODUCTION

The third annual Squaw Butte Training Conference was conducted by the Bureau of Land Management near Burns, Oregon from September 6 through 20, 1951. The site for the meeting was the Squaw Butte-Harney Range and Livestock Experiment Station which is operated under joint agreement by the Bureau and Oregon State College. Forty-seven BLM employees attended, representing each Division and various offices scattered from Alaska to Washington, D. C. The program was divided by function, and each function was in charge of a discussion leader who assigned the particular topics to be discussed and arranged for the taking of notes. Everyone in attendance was required to participate actively in giving a part of the formal program.

Summaries of the various talks and discussions are reported on the following pages. These summaries are of necessity brief, and it is not intended that this report should be used as a reference in any of the technical fields covered. It merely serves as a record of what transpired at the conference. Obviously, the informal, after-hour discussions could not be recorded, but these were very important in the presentation of a comprehensive picture of the Bureau's activities and as a means of getting questions answered which were not of sufficient general interest to bring up during classroom discussion.

The purpose of the Conference was to give those in attendance a clearer concept of the Bureau's over-all functions, to obtain an interchange of ideas regarding the solution to typical land-use problems, to discuss and interpret existing policy, to demonstrate the results of research undertaken at the Station as applied to range management problems, and ultimately to improve our service to the public through discussions on methods for better management. An important by-product of a meeting of this type is the development of better working relationships through personal contact and fellowship between employees of all functions and levels of the Bureau. It is difficult to evaluate the benefits of the conference except over a long period, but it was the general opinion of those in attendance that the above stated purpose had been achieved.

It was through the combined efforts of everyone in attendance at Squaw Butte that this report is possible, and everyone deserves a share of the credit for the success of the conference. Special thanks are in order for Mr. Sawyer and his staff, whose opening day program set a high standard for the following speakers to equal; to Mr. Clawson for his interesting presentation of the Bureau's objectives --- past, present and future --- which provided a fitting climax for the conference; to Dick Bauman and Ed Cox, movie projectionists for six performances with only one minor interruption; to "Boo" Allen for taking the role of chauffeur in picking up the guest speaker and returning him to the airport the following day; to Bob Morgan, whose booming voice took the place of school bell and gavel in calling the group to order; to Harry Rathner, water boy; and to everyone else whose cooperation and enthusiasm made working with them a privilege and a pleasure.

Roland A. Rush

Chairman

INTRODUCTION

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Chairman

TABLE OF CONTENTS

I. Squaw Butte Station (Discussion leader: W. A. Sawyer)
- A. Introduction to Squaw Butte Station (W. A. Sawyer)..... 1
- B. Experimental Work on Mountain Meadowland (Clee S. Cooper)..... 2
- C. Range Research Program (Don Hyder)..... 2
- D. Livestock Research Program (Farris Hubbert, Jr.)..... 4

II. Administration (Discussion leader: Roland Rush)
- A. Personnel (Roland Rush)..... 7
- B. Management Improvement (Louis Miller)..... 8
- C. Purchasing and Property (R. L. Whitney) 9
- D. Fiscal and Budget (Garth H. Rudd) 9

III. Adjudication (Discussion leader: Joseph C. Conrace)
- A. A General Look at Adjudication (Joseph C. Conrace) 10
- B. Withdrawals and Restorations (William B. Kephart) 13
- C. Claims Against the Public Lands (Douglas Henriques) 15
- D. Land Status Records (Arvin Olswold) 18

IV. Cadastral Engineering (Discussion leader: Dupree R. Averill)
- A. Engineering Program (Dupree R. Averill & Arthur E. Calabra) 19
- B. Proposed Plan for Recording Corner Information (Arthur E. Calabra). 20

V. Range Management (Discussion leader: Robert E. Morgan)
- A. Organization of the Division (R. E. Morgan) 21
- B. The Taylor Act (R. E. Morgan) 22
- C. The Science of Range Management (Max W. Bridge) 22
- D. Range Surveys (Myron H. Allen) 24
- E. Adjudication of Grazing Privileges - Water Base (Myron H. Allen) .. 25
- F. Dependent Property Surveys (William J. Malencik) 25
- G. Adjudication of Grazing Privileges - Land Base (Wm. J. Malencik) .. 27
- H. Applications, Appeals and Hearings (William J. Malencik) 28
- I. Licenses and Permits, Fees, Rules of the Range and their Enforcement (Virgil Pate) 28
- J. Advisory Boards (Keith E. Norris) 29
- K. Administration of Grazing Leases (Edward C. Booker) 31
- L. Utilization Checks (J. R. Penny) 32
- M. Range Management Plans (J. R. Penny) 33
- N. Range Management Plans - Southwest (Myron H. Allen) 35
- O. Area Manager's Responsibilities (H. B. Rathner)..... 36
- P. Area Management Panel Discussion (J. R. Penny) 37

VI. Range Management Field Trip (Discussion leader: Wm. James Anderson)
- A. Discussion Preliminary to Field Trip to Central Oregon Land Utilization Project (William Anderson - SCS) 39
- B. Management and Conservation Program on the Central Oregon Land Utilization Project (William F. Currier - SCS) 40
- C. Field Trip to Central Oregon LU Project 41

VII. Soil and Moisture (Discussion leader: Harry Pearson)
A. Soil and Moisture Conservation (Harry Pearson) 43
B. Cooperation Between BLM and Other Agencies (Thomas Hall) 49
C. Range Waterspreading (Norman French) 51
D. Range Reseeding (Norman French) 52

VIII. Alaska (Discussion leader: Virgil T. Heath)
A. Timber Management and Fire Control (Virgil T. Heath) 53
B. Land Classification (L. T. Main) 54

IX. Land Planning (Discussion leader: Virgil O. Seiser)
A. Function and Organization for Work (Virgil O. Seiser) 56
B. Examination and Classification of Public Lands in Answer to Specific Applications (Douglas Henriques) 57
C. Appraisal of Land for Disposal (L. T. Main) 59
D. General Land Classification and Planning: Comprehensive Area Surveys and Detailed Area Classification for Isolated Tract Areas (Edward Cox) 60
E. The Small Tract Program (Franklin Bruins) 62
F. The Mining Program (Donald Reed) 63
G. Mineral Examinations (Otto Metzger) 66
H. Program Planning (J. R. Penny) 68

X. Legal (Discussion leader: H. Lieberman)
A. The Legislative Program (H. Lieberman) 71

XI. Forestry (Discussion leader: G. H. Sharrer)
A. Forestry Field Trip (Sharrer, Bauman, Casey, Craft, Healy, Pope, and Ter Bush) 72
B. The Need for Proper Forest Inventory (Charles M. Genaux) 72
C. The Appraisal of Market Values of Merchantable Timber in Region V as Compared to that in Region I (Larry Casey) 73
D. Woodland Management (Larry Casey) 73
E. Access Roads (Frank Ter Bush) 75
F. O & C Sales Program (Ralph Healy) 77
G. Fire Control (Virgil T. Heath) 79

XII. BLM --- Past, Present and Future (Marion Clawson) 80

APPENDICES
1. Guest Speakers
"Land Problems in the Philippines", Dr. A. L. Strand
"Management", Joseph Rupley
2. Films Shown at Squaw Butte
3. List of Participants and Guests

SQUAW BUTTE STATION

"INTRODUCTION TO SQUAW BUTTE STATION"

W. A. Sawyer, Superintendent, Squaw Butte Station

The speaker welcomed Bureau of Land Management personnel attending the 1951 conference to Region I on behalf of Regional Administrator Roscoe E. Bell and the Squaw Butte Station.

The Experiment Station facilities were explained, and it was pointed out that the range and base property in the station was typical of that found in the big sagebrush zone. The area of influence of the station extends beyond the so-called service area of the station. The service area has been defined as including Southeastern Oregon, Southern Idaho, Northern Nevada and Northeastern California. There was a brief discussion concerning the relationship between range management and improvement and base property use and production. It is in the main impossible to accomplish the utmost as a result of better range management except by bringing about improved use of base property by which livestock producers can make the necessary adjustments resulting from or necessary to the range improvement. Bureau of Land Management personnel may feel that they are not concerned with livestock nutrition or production and use of forage crops from base properties. Improved quality in livestock, better livestock nutrition and greater production of high quality winter feed are all tools in the development of a psychology among stockmen making possible range improvement through changes in management and practices.

Bureau of Land Management personnel have a greater responsibility to the livestock industry than many may realize. No other agency is in a position to do as much for livestock producers. In the earlier days of agencies who are administering grazing, it was possible for livestock producers to purchase more land or to make other federal lands assist in permitting adjustments brought about by the administering agencies. Today there are no federal lands not under regulation, and the opportunity to purchase additional land is certainly limited. This situation requires that the private lands now owned by livestock producers be considered as an essential part of the grazing land management program. The Squaw Butte-Harney Experiment Station, in developing and carrying out its research program, is working on the basis of the thinking as outlined above.

Administrative people generally do not have adequate time to keep abreast of the research work being done in range management and related fields. Many men devote considerable time to reading research reports and publications, but in the main time does not permit adequate reading and certainly does not permit enough intensive thinking and study to make maximum use of the results of research in administration. It is the belief of the speaker that the Bureau of Land Management could profitably use one or more men in each region to assist the field personnel in bridging the gap between research and administration or field activity. In effect these men would be extension men in the same sense as the extension service bridges the gap between research in the land-grant colleges and the farmers and ranchers making use of that research.

Mr. Hurt of Missoula, Montana, was introduced. Mr. Hurt is a liaison officer for the Forest Service and is devoting his time to obtaining more coordination in research and more cooperation between research and administration. Mr. Hurt was on a tour and stopped at Squaw Butte to get acquainted with the research program carried here.

"EXPERIMENTAL WORK ON MOUNTAIN MEADOWLAND"

Clee S. Cooper

The program has been broken down into three phases of investigation of the possibilities for increasing forage production as follows:

(1) Mountain meadow in their native state

(2) Mountain meadows broken up and a seed bed prepared under existing soil and irrigation conditions

(3) Mountain meadows broken up and a seed bed prepared under controlled irrigation.

Phase one is now under investigation and meadowland is being prepared for work in the other two phases. Preliminary data indicates rather startling possibilities for improvement by the use of fertilizer. An increase of 3,000 lbs./acre of meadow hay was obtained by the use of fertilizer; however, the cost of this increase was high, although not prohibitive. It is believed that the same increase may be obtained at a much lower cost by increasing the amount of nitrogen and decreasing the amount of phosphorous used.

Mr. Cooper pointed out some of the relationships of increased hay production to range management, stating that greatly increased production may affect rangeland in one of two ways - by relieving some of the pressure on range land by allowing some grazing of livestock on base properties which are now being used almost exclusively for hay production - or by increasing the demand on rangeland by increasing the winter carrying capacity of livestock on base properties. In summing up, he used the above relationships to point out the need for close cooperation in research, pointing out that an increase in production brought about by any form of agricultural research affects every other field of related research, and that in agriculture we must constantly be aware of what is going on across the fence if we want to reach our production goal.

RANGE RESEARCH PROGRAM

Don Hyder

Rotation-Deferred Grazing

Two separate studies in which rotation-deferred grazing has been compared with season-long grazing have been completed. Both studies emphasized the need for caution in planning a change from season-long grazing to rotation-deferred grazing. Complete deferment of grazing of one unit of the range obviously results in heavier grazing use on at least a portion of the remainder while the grass is green and growing, unless: (1) the opening date of grazing is delayed, (2) the stocking rate is reduced during that period, or (3) some combination of adjustments are made in grazing management to retain proper grazing during the growing season on those units not deferred. Where season-long grazing is being used to its greatest benefit, grazing is balanced to the growth of the grass so that a near maximum amount of cropping is made on green grass. In such cases a change in management to rotation-deferred grazing may result in serious seasonal overgrazing which will not be repaired by succeeding years of deferment in the pasture rotation order as occurred

in the work at Squaw Butte. The additional flexibility required in grazing management to maintain the proper seasonal balance of cropping constitutes at least a temporary disadvantage of rotation-deferred grazing, which must be considered along with the additional fencing and handling of cattle that is required.

Where flexibility in operation and physical facilities are adequate, rotation or alternate grazing is advisable. The primary advantage is probably that rotation grazing will cause the operator to give closer attention to the growth performance of the forage plants and to the degree of cropping. The decisions to begin grazing, conclude grazing, and move the cattle from one unit to another should be made in the field. Thus cropping may be continually re-adjusted to the forage plants. Under season-long grazing the tendency is to give primary attention to the nebulous and variable factor of grazing capacity. Such "grazing-capacity" planning is usually wrong because it is based upon past rather than present performance of the forage plants.

The work at Squaw Butte also indicated that grazing may be more evenly distributed over large range pastures under rotation grazing than under season-long grazing.

It appears that these advantages can be gained with alternate grazing as well as with rotation-deferred grazing. Alternate grazing, that is rotation grazing without complete deferment of one pasture unit, may have a distinct advantage over rotation-deferred grazing since partial cropping would be allowed on all pastures while the grass is green and most nutritious. Station personnel plan to initiate a study in which alternate grazing will be compared with rotation-deferred grazing as soon as pastures have been prepared.

RESEEDING RANGE LAND TO CRESTED WHEATGRASS

Methods of Planting Crested Wheatgrass

The research work has been designed to test the possibilities of improving methods of planting through the use of roller equipment to firm the soil. The difficulties involved in drilling or broadcasting seed on soil still rough and loose from plowing are easily observed. With drilling, the seed may be dropped on the surface or drilled as deep as 5 to 6 inches. With broadcasting, seed coverage is commonly left to the elements of weather. Both methods are poor.

For many years a firm seedbed has been considered essential, but little has been done about it. Our preliminary work shows outstanding improvement by rolling. The poorest method resulted from broadcasting during the late fall, 1950 on freshly plowed soil without further treatment. Rolling to firm the soil upon the seed improved fall broadcasting by 1300%. Next year our research work will concentrate on the possibilities of improving both drilling and broadcasting methods by rolling.

RANGE IMPROVEMENT THROUGH SAGEBRUSH CONTROL

Spraying With Chemicals

We are all interested in what can be done with selective herbicides to control big sagebrush. Consequently a program of research was initiated in 1950 to determine the date when 2,4-D is most effecitve in killing big sagebrush, the required rate of application, and the formulation which is most effective. To date over 600 plots have been included in the study.

Summary Statements of 1950 Spray Applications

When to Spray? Spraying during the month of May was most effective, but results indicate a possibility of poor reliability during the last week. A good rain about the first of June extended the effective period through the 12th of June. It appears that the last week or two of April will be more reliable than the first week of June. For spraying small test areas the middle of May is suggested.

How Much to Spray? A rate of one pound of 2,4-D acid equivalent resulted in effectiveness up to 89% of individual sagebrush plants completely killed with the crown of the remaining live ones showing only a few live branches. The average of plots sprayed at the one-pound rate during May appears to be near 65%. For spraying small test areas a rate of 1½ to 2 pounds of 2,4-D acid equivalent is suggested.

What Formulation Should be Used? So far we have included 25 different formulations of 2,4-D and 2,4,5-T in our study. The most outstanding thing to report so far is that the sodium salt formulation of 2,4-D has resulted in very poor and inconsistent results. Amine or ester formulations are much better. The chemical 2,4,5-T appears to be more effective than 2,4-D, but costs considerably more. The addition of an oil such as kerosene at a rate of 2 gallons per acre improved results on some plots, but apparently not enough to pay for the additional cost. For spraying small test areas amine or ester formulations mixed with water at a rate of 10 gallons per acre is suggested.

Where to Spray? Select areas that support a dense stand of big sagebrush and a fair stand of perennial bunchgrasses. Keep in mind that the chemicals will also kill other brush plants such as bitter brush and weeds that contribute forage. Where an important amount of forage is contributed by such susceptible species the chemicals should probably not be used.

LIVESTOCK RESEARCH PROGRAM

Farris Hubbert, Jr.

The livestock research on the Squaw Butte-Harney Range and Livestock Experiment Station is conducted with cattle managed in a manner similar to most ranches depending upon sagebrush-bunchgrass range for their summer feed. The station maintains a breeding herd of approximately 180 cows and 120 yearlings.

The Influence of Winter Nutrition on Range Beef Cattle Production in Eastern Oregon

The purpose of this study was to investigate the influence of three planes of winter nutrition on the production of Hereford beef cows depending upon sagebrush-bunchgrass type range for their entire summer feed and upon native meadow hay for their main winter feed. The three rations fed were:

Lot I - Only enough meadow hay to maintain the animals in a healthy condition but not enough to prevent a loss in body weight of approximately 100 pounds.

Lot II - All of the meadow hay that would be cleaned up in a 24-hour period.

Lot III- One pound of barley and one pound of cottonseed meal per day in addition to all of the meadow hay that would be cleaned up in a 24-hour period.

Four years' study shows the production per cow in terms of calf weaning weight was 183, 253 and 289 pounds for Lots I, II, and III respectively. The main influence on production was the percentage of calves dropped, which was 69, 84 and 88% respectively for Lots I, II, and III.

A financial summary of the study indicates that it does not pay to limit the hay fed to breeding cows during the winter. Practically the same return on the dollars invested can be expected by supplementing with one pound of barley and one pound of cottonseed meal in addition to a full feed of meadow hay, as can be expected by a full feed of meadow hay alone.

(Progress Report)
The Response of Brahman x Hereford Crossbred Cattle to Eastern Oregon Conditions

A comparison is being made of the ability of Brahman x Hereford and Hereford weaner calves to gain on a winter ration; of Brahman x Hereford and Hereford yearlings ability to gain on sagebrush-bunchgrass range; and of the grazing habits of the two groups of yearlings.

When fed the same winter ration at the same rate from December 9, 1950, to April 27, 1951, Hereford weaner steers gained 13 pounds more than Brahman x Hereford weaner steers. The Brahman x Hereford yearling steers then gained 26 pounds more per animal than the Hereford steers from May 5 to August 24 while on sagebrush-bunchgrass range.

Incomplete data shows that the Hereford steers tend to cover a greater distance in their grazing activities than do the Brahman x Hereford crossbreds, but spend nearly one hour a day less time at grazing.

(Progress Report)

Old Versus New Meadow Hay as Winter Feed for Beef Cattle

It is a general practice in this area to carry a supply of hay from one year to the next as a source of emergency feed in case of a short hay crop or a severe winter.

The purpose of this experiment is to determine whether it is best to feed the hay from previous years' crops first each winter, or to feed all of the new hay each winter before using the old hay.

The carotene content of the hay is believed to be the most important factor in answering this question. The main objectives of the study are to determine:

(1) What level of carotene is necessary in our meadow hay to protect the breeding herd from vitamin A deficiency.

(2) How much carotene does our meadow hay contain when it is one, two and three years old.

During the winter of 1950-51 the new hay used contained approximately 40 ppm of carotene and the old hay contained approximately 20 ppm of carotene. The carotene blood level of the cows fed new hay was high enough throughout the winter period that no trouble from vitamin A deficiency would be expected. The blood carotene level of the cows fed the old hay did get low enough to cause some concern, but no symptoms of vitamin A deficiency were noted in any of the calves dropped. The calving results of 1952 will show whether the low carotene level had any effect on fertility.

(Progress Report)

Protein Supplement for Sagebrush-Bunchgrass Range

Work was initiated this year to study the use of the cottonseed meal-salt mixture self-fed on the summer range as a supplement to the range grasses. The results will be measured in terms of calf gains, condition of the cows and conception rate of the cows.

One group has been fed a cottonseed meal-salt mixture since July 4. The cottonseed meal intake has been held at one pound per day. It was found that a 50% cottonseed meal-salt mixture was required to hold the intake of cottonseed meal at one pound per day. As yet no response to the supplement is apparent in terms of calf gains or condition of the cows.

The two groups of cows included in the range supplementing work will be incorporated in a winter nutrition study.

ADMINISTRATION

PERSONNEL

Roland A. Rush

A personnel program in any government agency must operate within the framework of the laws established by Congress and the rules and regulations set up by the Civil Service Commission. There is a great deal of variation among agencies in the extent and scope of their personnel programs. We feel that BLM has an adequate program in regard to its extent, and a good program considering the limited staff and funds available. Basically, the Bureau's personnel office is striving to provide the following service: (1) to staff the organization with the best qualified people; (2) to place employees in positions where their skills may be fully utilized; (3) to facilitate the development of employees to their fullest potential.

One phase of personnel work which bothers field people and also is of concern to the Washington Office is the matter of fixing wage rates for ungraded personnel. It is the policy of the Bureau and the Department to set the rate of pay for ungraded positions in accordance with rates prevailing in the area for comparable work as determined by local wage surveys. Normally it is the district manager who must make this survey. First, a determination must be made of the exact job title and whether the job involves operation and maintenance or construction type work. Then other employers in the area are contacted for comparable rates. In doing so, the best bet is to contact other federal agencies first, then state, county and municipal agencies, and finally private business. It is realized that in sparcely populated areas, it may be impossible to conduct a comprehensive survey, but every effort should be made to gather meaningful data from every available source. Recommended wages which differ from the "Going rate" as shown on the survey should be fully explained and justified.

Position classification authority through grade GS-7 has recently been given to the regions, which means that the regions now have considerably more responsibility with regard to classification than was previously true. Actually, every supervisor is responsible for seeing that his employees perform the duties shown on the job sheet. If he feels that the job sheet does not reflect the requirements of the position, it is his responsibility to make known any proposed changes to the person with authority for classification. In determining the grade level of a position, the classifier is governed by the classification standards established by the Civil Service Commission. The ideal of every position being accurately described on a job sheet will never be reached, because the duties of positions are constantly changing and shifting, but it is the goal toward which we strive. Classification is no cure for such problems as bad organization, poor supervision, misassignment and inadequate training, but it is the best system so far devised for maintaining internal alignment of salaries according to the difficulty of work performed and responsibility.

Other phases of the personnel program of the Bureau were briefly described and discussed.

Management Improvement

Lewis Miller

Management improvement is simply a better way of doing a job which results in its being done with the same or better results with less man hours, less paper processing, or less expenditures. It involves a new approach to a problem, such as a change in methods, procedures or regulations, a change in flow of work, the elimination of a review or some similar action which results in the job being done cheaper and more efficiently than it was done previous to the change. It is a new and improved way of doing a task which we have been performing. Getting to a backlog in itself is not a management improvement. The reason why it was possible to get to the backlog may be an excellent example of management improvement. The Bureau's program places particular emphasis on management improvement at the operating level.

The Bureau's present methods of management review and appraisal include:

1. Each Regional Administrator will include in his monthly report under a separate heading a statement as to the progress made on management improvement problems during the month. It is important that this heading be shown even though no improvements were made.

2. Each operating division will conduct at a regional level an administrative and technical review of its functions at least annually with particular emphasis on program.

3. The operating division and the Management Planning staff will conduct at a national level a joint administrative and technical review at least once every three years of the various functional areas of the region.

With regard to the identification and resolution of problems, a semi-annual report is required at each level of the Bureau showing the progress made on specific management problems and the problems solved during the six months period.

Closely related to the management improvement program is our forms control program. The most important feature of this is the requirement of the Federal Reports Act of 1942. Under this act any form or plan which collects identical information from 10 or more persons must have prior approval of the Bureau of the Budget. Any office using such a form not previously approved, should forward copies thereof to the Washington office so that Budget Bureau approval may be obtained.

Another tool in the development of our Management Improvement Program is the incentive awards program. Under this program five different types of awards are possible. It is the responsibility of all operating people to take advantage of this program so that proper recognition may be given when an outstanding job is being done.

PURCHASING AND PROPERTY

R. L. Whitney

A review was made of the responsibilities of employees who are authorized to obligate government funds under Bureau purchasing authority, and the responsibility of all employees in safeguarding and obtaining the maximum use of government property.

The need for more long range planning of supplies to be required was pointed out to eliminate numerous small purchases which often results in so-called "emergency" purchases.

The purchase of items where the authority to buy is questionable should be referred to the regional office procurement officer for decision.

The increasing part that General Services Administration is playing in the procurement and property field was outlined.

It was shown that more care should be exercised by employees reporting excess property to insure the accuracy of the condition and nomenclature. This is necessary to prevent criticism of the Bureau from receiving Bureaus or Agencies for a bad bill of goods.

FISCAL AND BUDGET

Garth H. Rudd

The responsibilities of the Division of Administration not only to the Bureau of Land Management but also to Treasury Department, General Account Office, General Services Administration, etc., were outlined.

The fact was brought out that budget preparation has become a year around job. This was illustrated by outlining in some detail the intricate problems involved such as preparation of first estimates--basis and justification therefor; departmental action thereon; submission of revised budget and action thereon by Bureau of the Budget and House of Representatives; submission of a new budget which will stand a reasonable chance of passage by both houses of Congress, and finally actual appropriation of funds usually quite some time after end of the fiscal year. It was pointed out that work measurement standards such as case loads, acres to be surveyed and board feet of timber to be sold were good standards for use in preparing budgets of the Land Office, Survey and Forestry functions, but that it was extremely difficult to tie the work of Range Management and other functions to such definite work measurement standards.

The quarterly apportionment problem was briefly outlined and the necessity for staying within such apportionments was explained.

After a brief question and answer period on per diem rates, travel advances, shipment of household goods, payroll and other routine accounting problems, the discussion was concluded by commenting on new and approved methods of accounting for federal funds.

Adjudication
September 7
Discussion Leader: Joseph C. Conrace

"A General Look at Adjudication"
Joseph C. Conrace

The function of adjudication has been and still is generally misunderstood. Generally speaking, adjudication is an adjudgment or a determination of a right between two opposing claimants. A famous example would be the judgment rendered by King Solomon when two women claimed parentage of the same child.

Specifically, and with relation to the function and scope of the Bureau of Land Management, adjudication is that function, process, procedure, or act whereby any claim to, or request for a right or privilege in, federal land or its natural resources is granted or denied, in whole or in part. Clear examples are the classification of land for definite purposes, allowance of agricultural entries, issuance of oil and gas leases, approving land exchanges, and so on through the entire category of public land laws.

For its primary purpose, adjudication provides the vehicle through which

1. The Bureau of Land Management is able to perform its function of administering the public lands and resources therein.

2. The general public is able to initiate and prosecute to a conclusion an application under any of the applicable public land laws for a right to federal land or its resources.

To show the indispensability of adjudication in the administration of public lands, it is only necessary to reflect that the original public domain comprised an area of approximately 1,800,000,000 acres, or 2,800,000 aquare miles. Over 5,000 public land laws have been enacted and innumerable regulations and instructions have been written to provide for the administration of the public domain. The applicability of these laws, regulations and instructions to the millions of specific cases and claims has been and is now the interpretive function of adjudication. This function enters into almost every phase of administration of the public lands. It is not too far afield to term adjudication as the keystone upon which rests the functional structure of public land administration.

As to the manner in which adjudication operates, let us examine any application under any public land law for the acquisition of, or the granting of a right to or privilege in, federal lands or resources therein.

After an application has been filed and recorded in the land office having jurisdiction over the lands or resources involved, a determination must then be made as to whether or not the applicant is entitled to obtain all or any part of what he has applied for. That process involves four important considerations:

1. Is the applicant qualified to obtain that which he has requested?

There are certain prerequisites the absence of which would serve to disqualify the applicant at the very outset. The requirements under the applicable laws and regulations must be carefully examined with respect to the particular application or claim involved in order to determine whether or not the applicant is qualified to obtain that which he has requested.

2. Is there authority of law to grant the right or privilege applied for?

There is no difficulty in determining this question when the answer is obvious, as, for instance, the denial of a recent application for the granting of certain rights to lands on the moon. In other instances, however, a great deal of difficulty may be experienced in reaching a determination. A case in point in this respect is the filing of an oil and gas lease application to acquire the right to oil and gas deposits in submerged lands of the United States. Altho the United States Supreme Court has held that submerged lands off the coast of the United States belong to the Federal Government as against State ownership, no law has as yet been enacted by Congress to authorize the removal of oil and gas deposits in submerged lands.

3. Is the public land or resource involved subject to the appropriation, right or privilege applied for?

As the reverse of the preceding consideration, it must be determined whether or not the public land or resource involved is in fact subject to the appropriation, right or privilege which has been applied for. For instance, the land or resource may have been withdrawn for reservoir or power site purposes and therefore not subject to any other form of appropriation while so withdrawn. On the other hand, the withdrawal may be a limited one and is effective only as to certain forms of appropriation and not to others.

4. Is the application void at the outset or are the disqualifications or defects, if any, remediable?

Certain defects render an application void at the outset and of no force or effect, while other defects may be remediable and may have no adverse effect on the effectiveness of the application from its

filing date or may have the effect of validating the application from the date the defect is remedied. For instance, the absence of a required filing fee will render an oil and gas lease application void at the outset and it is returned to the applicant without recording. If an oil and gas lease application for acquired lands is filed in a land office, it is remailed to the Washington Office (the proper office of filing) and the application is not segregative until it is received and officially filed in the Washington Office. Where an applicant does not furnish sufficient information as to citizenship, details of partnership, evidence of incorporation, etc., and such defects are remedied subsequently, the effectiveness of the application from its filing date is usually not weakened. Because of the many diverse requirements under the laws and regulations, however, great care must be taken in adjudicating the rights of the respective parties in instances of remediable defects. It is incumbent upon an adjudicator to inform the applicant of his rights under the public land laws and, in instances of defective applications, to indicate the remedy where there is one. Furthermore, if an applicant does not agree with a decision rendered on his application, he has the right to appeal to the next higher echelon of jurisdiction. Thus, an appeal may be taken from a decision rendered by a land office manager, in turn, to the Director and thence to the Secretary. After the Secretary has rendered his decision, the applicant's next recourse (if he still feels aggrieved) is to the federal courts.

As the result of the filing of an applicant, the applicant may be granted a patent to the particular public land for which he has applied; for instance, a patent is granted under the homestead, desert land, exchange, public sale, mining, etc., laws. Upon issuance of such patent, the patentee obtains complete rights to the patented land, subject only to the restrictions and reservations, if any, as enumerated in the patent. On the other hand, the applicant may have applied for a temporary use of the land, such as a right-of-way for road or telephone line, or for a special land use permit for the drilling of a well to obtain evidence of the availability of a water supply, etc. An oil and gas or other mineral lease is another form of temporary use, since the lease ordinarily expires when production ceases. There have also been temporary withdrawals of areas for military purposes which have automatically reverted to the public domain upon cessation of hostilities.

The United States mining laws are applicable to the States of Arizona, Arkansas, California, Colorado, Florida, Idaho, Louisiana, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming, and to Alaska. Lands containing vein or lode deposits can be located and patented where vacant and unappropriated in the public domain, in National forests in the States named excepting purchased lands, in patented and unpatented stock-raising homesteads, in other agricultural entries not perfected or patented where prospecting can be done peaceably, and in railroad grants

that have not been patented. Public lands temporarily withdrawn from settlement, location, sale, or entry and reserved for classification or other public purposes are, as a rule, open at all times to exploration for metalliferous minerals and to location and purchase under the mining laws. However, lands withdrawn for reservoir sites and certain other purposes are not subject to mining location; neither are these lands included in power sites so subject unless restored under the Federal water power act. One desiring to prospect any particular lands should ascertain from the Manager of the U. S. Land Office whether or not they are withdrawn or reserved from mining location. Placer claims generally can be located on lands having the same status as lands subject to location if containing vein or lode deposits, except that deposits of coal, oil, gas, oil shale, sodium, phosphate, and potash, and In Louisiana and New Mexico, sulphur, belonging to the United States can be acquired only under the mineral leasing laws and are not subject to location under the United States mining laws.

"Withdrawals and Restorations"
William B. Kephart

The control over the public lands and other property of the United States is vested in Congress by the Constitution. Congress, it is said, has passed some five or six thousand laws relating to the use or disposaloof the public lands, and these are commonly referred to as the public-land laws. When it is desired to suspend the operation of these laws so far as they relate to certain portions of the public lands, the method of suspension is called a withdrawal or reservation.

For many years, the President or other members of the executive branch of the Government, made these withdrawals, and it is presumed that this practice was known to and acquiesced in by Congress. This assumption of authority by the President, as agent of Congress, is referred to as the "inherent" authority of the President to withdraw lands.

Congress has authorized the President and the Secretary of the Interior, by specific statutes, to withdraw the public lands, and this type of authority is referred to as "statutory" authority. The principal authorization for the President is for temporary withdrawals under the provisions of the Act of June 25, 1910. Under this act, as amended, the lands are open at all times to location, disposal, etc. under the mining laws so far as they relate to metalliferous minerals. The so-called "general withdrawals" of all of the public domain lands in the States, were made under the 1910 act. The principal authorizations

for the Secretary of the Interior to make withdrawals are the Reclamation Act, the Airport Act, and the Taylor Grazing Act. The President and the Secretary of the Interior have made certain delegations of their respective authorities to withdraw lands.

Withdrawals may also be made by act of Congress, or by formal orders such as proclamations, executive orders, public land orders, departmental orders, etc. Withdrawals for power purposes may be made by the filing with the Federal Power Commission of an application for a power project under the provisions of the Federal Power Act.

Withdrawals are made for almost any public purpose and in general are for classification, in aid of legislation, national forests, grazing districts, reclamation projects, power, mineral withdrawals, military, national monuments, etc. National parks must be created by act of Congress, as well as Indian Reservations, and in certain states national forests and additions thereto.

The Attorney General has held that withdrawal orders cannot be made self-terminating, possibly because of the provision in the 1910 act that withdrawals thereunder shall remain in effect until revoked by the President or an Act of Congress.

Where it is desired to release lands from withdrawals, we have one or two applicable terms, "revocations" and "restorations". A revocation is the order which renders the withdrawal order inoperative. Frequently, but not always, the lands are restored to application by the same order. There are restoration orders, also, which open lands to application, where the lands have not been withdrawn, such as lands reconveyed in exchanges, or under the Carey Act. The lands have, by acceptance of title, become public lands, but have not theretofore, at least for a long period of time, been subject to application. Lands withdrawn for reclamation purposes may be opened to mining location upon application to the Bureau of Reclamation, under the Act of April 23, 1932. Upon a determination by the Federal Power Commission that lands in a power project, power site reserve, or a power site classification, that the value of the lands for power purposes will not be destroyed by disposal under the public-land laws, a restoration order may be issued.

Restoration orders usually contain a provision for a 35 day period before they otherwise become effective, in order that all interested persons may have an equal opportunity to file applications for the lands. Unless the lands are in some other withdrawal, the restoration orders contain a provision for a period of 90 days in which veterans

of world war II may file application under the homestead or desert land laws, or the small tract act. The Federal Power Restorations provide for a period of 90 days in advance of the veterans' preference period, in which the State may file an application for a highway-right-of-way or material site. Any lands remaining unapplied for after these preference right periods are open to the public in general for application under any public land law.

Clearances between the field and Washington Offices are provided for in Sections 57.130 and 57.131 of the Manual of the Bureau of Land Management. The whole of Part 57 of the Manual relates to Federal Register Documents, their preparation and processing. There are special procedures for small tract classifications and opening orders, shore space restoration orders in Alaska, air navigation site withdrawals and permits, stock-driveway withdrawals and restorations, and procedures will soon be issued for federal power restorations by the Regional Administrators.

There is a general program in the Department covering the broad subject of inventory of existing withdrawals with a veiw to the revocation of those withdrawals whose purpose has been served. Another project provides for the filing of applications for withdrawals in the land offices, serializing, the segregation of the lands from application or entry while the application for withdrawal is being considered, and the by-passing of the Bureau of the Budget and the Attorney General in consideration of the proposed orders. This project is under consideration.

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Copies of the Security Regulations of the Department were distributed, and a short discussion given as to acting upon, storage of, and mailing of classified material.

"Claims Against the Public Lands"
Douglas Henriques

Public lands of the United States may be grouped into two major classes: those in some sort of permanent reservation or semi-permanent withdrawal, and those in the vacant unappropriated public domain. Some of the lands in the first class are subject to entry or lease under the public lands laws if certain conditions are met; some of the withdrawn lands are not subject to any form of exploitation or appropriation by the public.

The public lands under the administration of BLM are subject to entry, lease, or other disposition, after proper classification of the lands sought. The types of claims for these public lands may be contained in two major types: applications for title, and applications for use of the land or its resources.

Applications for title include the following: homesteads, public sale, desert-land, small tract, private or state exchanges, state selection, color-of-title, Indian allotment, municipal airport, municipal park and cemetery, townsite, and mineral claims for patent. Applications for use only include grazing lease, grazing permit, mineral leases, rights-of-way, private airport, and special land-use permit.

The statutory authority, purpose and requirements of some of the more important types of claims against the public lands are as follows:

Homestead entries on public lands are authorized by the Act of May 20, 1862. The purpose of this act was to induce settlement, cultivation, and establishment of homes on the public lands, by granting not to exceed 160 acres to settlers.

Other homestead acts include the enlarged Homestead Act of February 19, 1909, which permits entry of not to exceed 320 acres of dry-farming land, the Reclamation Act of June 17, 1902, which permits homestead entries within reclamation projects and the Forest Homestead Act of June 11, 1906, which authorizes homestead entries for lands within National forests.

Desert-land entries are authorized by the Act of March 3, 1877. The purpose of the desert-land act was to encourage and promote reclamation, by irrigation, of the arid and semi-arid public lands in the West through individual effort and private capital, assuming that settlement and occupation would follow after the land was made habitable and productive.

The sale at public auction of isolated or disconnected tracts of public land not exceeding 1,520 acres, and tracts not isolated, of not exceeding 760 acres the greater parts of which are mountainous or too rough for cultivation, is authorized by Section 2455, R.S., as amended by Section 14 of the Taylor Grazing Act and the Act of July 30, 1947. The purpose of the act is to eliminate small isolated parcels of public land so as to effect better administration of the remaining public land.

Small tract leases and sales are authorized by the Act of June 1, 1938, as amended by the Act of July 14, 1945. The purpose of the Act is to promote the beneficial utilization of the public lands, and at the same time to safeguard the public interest in the lands. Sales of small tracts are contingent upon the lessee fulfilling all of the requirements set forth in his lease.

Exchanges, both private and State, are permitted under Section 8 of the Taylor Grazing Act of June 28, 1934, as amended by the Act of June 26, 1936. The purpose of this Act was to provide for the most beneficial use of the public range by blocking holdings and eliminating small tracts of public land difficult to administer.

Mineral claims to the public lands are permitted by the Act of May 10, 1872. The purpose of the Act was to fix the amount of surface allowed a locator for working purposes, but also to protect him in exclusive possession and enjoyment of his lode and all other veins, lodes, or ledges which apex within the boundaries of his claim, and also to permit the location and development of minerals in earth, sand, or gravel, and also to permit acquisition of non-mineral land, not to exceed 5 acres, as an auxiliary millsite to assist in developing valid mineral locations.

Leasing of coal, oil, gas, potassium, sodium, phosphate, oil shale, and in Louisiana and New Mexico, sulphur, and lands of the United States containing such deposits are provided for in the Mineral Leasing Act of February 25, 1920. The purpose of the Act is to provide for the development of the leasable minerals in the public and acquired lands of the United States under a leasing system.

Supervision of grazing on vacant public lands of the United States is provided for by the Taylor Grazing Act of June 28, 1934, as amended by the Act of June 26, 1936. The purpose of this Act was to provide for the most beneficial use possible of the public range in the interest of graziers and the public at large, to define grazing rights, and to protect the grazing rights by regulation against interference, but with no right, title, interest, or estate in or to the public lands inuring to any grazier. Conservation of the renewable natural resources in the public lands of the United States was another purpose of the Act. This Act has a great influence over many of the present claims toward the vacant public lands. Organized management of grazing is had in the grazing districts established under Section 3 of the Act, and on leases issued under Section 15. Most lands sought under the agricultural land laws have to be classified as suitable for the purpose intended, under Section 7. Exchanges are permitted by Section 8, public sales of isolated tracts by Section 14.

There are multitude of Acts granting rights-of-way, each for a specific type or types of right-of-way. Grants of easement are available for railroad, canal, ditch, reservoir, highway, tramroad, oil and gas pipeline, water pipeline, electric power transmission line, telephone and telegraph line, and others.

Despite the fact that more than 5,000 land laws have been enacted since 1800, occasional applications for use of the public lands are not covered by any law or regulation, per se. To cover these situations, the authority contained in Section 453, R.S. (43 U.S.C. 2), is invoked to permit the issuance of special land-use permits when the contemplated use is not incompatible with orderly administration of the public land.

Land Status Records
Arvin Olswold

The observation has been made that land office records are of value to the public in relation to how current they are. In the land office at Cheyenne, there is a recording system of great value in this connection. Two sample plats show how this system operates.

The first plat represents the land office's triplicate copy of the plat of survey, the blue colored areas represent a section granted the Union Pacific Railway and a homestead entry patented without reservation of minerals to the United States. The red coloring represents State lands in which the United States is divested of all minerals. The yellow area is part of a stockraising homestead entry which was patented with a reservation of all minerals to the Government. Brown represents a State exchange under the Act of June 28, 1934, the State owning the surface and the United States owning all minerals. Purple represents a homestead entry patented with a reservation of oil and gas to the United States under the Act of July 17, 1914. The pink area was reconveyed to the United States under the Act of June 28, 1934, having first been a part of a school section, the State now owning the minerals. The area in green is intended to show a known geologic structure of a producing oil and gas field. However, since it is not a patented or alienated area, it should be shown on the oil and gas lease plat and not on the ownership plat. The white areas represent vacant public lands.

The second plat is an oil and gas leasing plat on which lands covered in a lease offer or lease are outlined in pencil. Those outlined with a penciled serial number represent lease offers or applications, and those with an inked-in serial number represent active leases. The outlines are all in pencil to save wear and tear from erasing when a lease is terminated for any reason or expires.

Our commonest users of the records, oil and gas lessees and checkers, are able to determine in a very few minutes the leasing status of all the lands in a township from these two plats. Also, with the aid of a typewritten legend we furnish, any person can in five minutes be shown how to find the ownership and leasing status of any land in which he may be interested. It goes without saying that status checking of any application by land office personnel is aided to the utmost by these excellent records. As a matter of fact, virtually every application is checked and recorded on the day it is filed. It is believed this can at present be done nowhere else, and certainly in no other way.

Very briefly the above describes a good ownership and use recording system.

ENGINEERING PROGRAM

Dupree R. Averill & Arthur E. Calabra

"Cadastral Surveying in the United States of America", a copy of a paper written by Earl G. Harrington, Chief of the Division of Cadastral Engineering of the Bureau of Land Management, for the conference of British Commonwealth and U.S.A. Survey Authorities, Wellington, New Zealand on November 13, 1950, was read by Mr. Calabra.

It discussed primarily the rectangular system of surveys since its inception in 1785 by the Continental Congress which provide for the orderly survey and disposal of the vast area belonging to the United States and known as the public domain. The paper also brought out that the above was not the basis for the survey and description of all the public lands, but a departure was provided for in the system in conducting the survey of private land claims, homestead entrys, townsites, small tracts and numerous other types of special surveys. Also mentioned is that the Bureau of Land Management is working out procedures necessary in the location, definition, marking and description of specific tracts of submerged land containing oil and gas deposits on the coast line of the United States.

Mr. Averill displayed some of the old original corner monuments and explained how to recognize them and what to look for in the field. In some cases, all too many, they are no more than a written record. The present corner monuments are now iron posts with the appropriate markings on a brass cap and firmly set in the ground.

He also explained that other government agencies have been permitted to make surveys but many have failed to evaluate technical and legal requirements. Therefore many original corners and new iron post monuments occupy separate positions upon the ground.

An explanation was given on the method of subdivision of sections into quarters or 160 acres, by midpoint division of quarters into 40-acre plots, etc.

A display of the various types of maps was shown. They were those of Geodetic Surveys, Topographic, Geologic, Hydrologic, Soil, etc., and of course copies of official G.L.O. township plats. One set of Township plats was unique in that a re-survey caused the creation of more than 36 sections.

The instruments used by a cadastral engineer were set up and a brief explanation of each was given. Then at an appropriate time a solar observation was taken and calculations made.

Throughout the entire program the speaker injected many examples and stories from his many years of cadastral surveying.

ENGINEERING

Arthur E. Calabra

Proposed Plans for Recording Corner Information (Set up by Leo M. Peterson, Cadastral Engineer, Region 4)

The different divisions of our Bureau have their specialized duties to perform, but all are concerned with land locations. Therefore, we are continually gathering knowledge of the section corners. Sometimes they are easily found, sometimes the search is exhaustive and time-consuming, and often they cannot be found at all because of poor or fraudulent surveys.

A member of our organization who finds a corner knows its location and description, and he knows of those he could not find. But possibly no one shares that knowledge.

To avoid the possibility of duplication work in the consideration of those lands again, it is proposed that consideration be given to the establishment of a plan for reporting and recording the valuable information.

The actual recording of the corner information can be on a form (a copy of which was passed to each of the members of the conference) which can be in a pad of pocket size so it can be carried and filled out in the field. It will show the township, range, and section. On a section diagram, on the form, symbols will indicate:

(1) Official corners found.
(2) Corners found but not known to be official.
(3) Corners searched for but not found.

In space below the description of the monument, dimensions above the ground, how it is marked, the bearing trees with courses and distances from the corner, should all be noted. Also a description with respect to natural features. Such a description would aid in finding the corners again.

Corners found with official Bureau of Land Management or GLO iron posts need only be reported where they are in a poor state of preservation or in danger of destruction.

A copy of the report should be sent to the various agencies concerned in the particular region and kept on file for further use in the Land and Survey Offic

The Forest Service long has maintained such a record, and too some grazing districts and some survey offices have some sort of corner data other than the official records. What is proposed is the installation of a workable plan applicable to and for the mutual benefit of all divisions of the regional organization.

RANGE MANAGEMENT

Organization of the Division
By R. E. Morgan

The Division of Range Management is one of six divisions included in the Bureau of Land Management. The Division is headed by a chief and his staff in Washington and five divisional chiefs and their staffs in the five western Regions. The Division of Range Management is broken down in the field into the branches of Range Management and Soil and Moisture Conservation.

There are fifty-four (54) range or area managers at the district level responsible for their respective areas of administration. These fifty-four (54) area managers administer sixty grazing districts.

In 1946, Rex Nicholson made a study of the Old Grazing Service and the Section 15 lease situation and recommended 242 employees in Range Management at the Washington Regional and District levels. After a study in 1950, Director Clawson recommended 250, or an additional 8. The nearest the number of employees approached the Nicholson plan was in 1949, when 182 Range Management employees were on the roll. It appears that in fiscal year 1952, the number of employees will nearly approach the Nicholson Plan.

The Taylor Act provides for the electing of users (stockmen) in grazing districts to advise the administrative employees on grazing applications, range allotments, rules and regulations, seasons of use of the range, and carrying capacity of the ranges. The District Advisory Board and the State Advisory Board elects a cattleman and a sheepman to the National Council.

Scope of Job. The grazing districts include approximately 142 million acres, with 15,000 cattle, 500 horse, 4,250 sheep and 279 goat permittees. The grazing districts furnish forage for some part of the year for 2,218,638 cattle, 73,961 horses, 5,942,481 sheep and 19,910 goats. Forage consumed in grazing districts by domestic livestock amounted to 14,331,032 animal months and game consumed an additional 1,124,173 animal months of feed.

In addition to the administration of grazing districts, there are approximately 15 million acres leased under Section 15 of the Taylor Act. There are approximately 11,300 leases and the leases vary in size from 40 acres, or less, to 70,000 acres.

The Taylor Act
By R. E. Morgan

The Taylor Act is a land-use act passed in 1934, to "Stop injury to the public grazing lands by preventing over-grazing and soil deterioration, to provide for their orderly use, improvement, and development, to stabilize the livestock industry dependent upon the public range, and for other purposes." The Act provides for grazing districts, grazing leases, homesteads, isolated tract sales and exchanges.

The Federal Range Code comprises the regulations under which grazing districts are administered. It was developed by the personnel of the Division, the legal staff and the advice and assistance of the District and State Advisory Boards, and the National Council. It is, of course, in conformity with the Taylor Act and provides for all actions in the administration of grazing districts.

The Science of Range Management
By Max W. Bridge

There are a number of definitions of range management wherein it is called both a science and an art. Stoddart and Smith define range management as the art or science of planning and directing range use so as to obtain maximum livestock production consistent with conservation of the range resources. From our standpoint we might consider it as management of range lands to obtain the maximum sustained yield of forage for both domestic stock and game consistent with the preservation or restoration of stable soil, moisture, and vegetative conditions.

In 1872, the first important reservation of public lands for conservation purposes was made by the withdrawal of the Yellowstone National Park Area. The first large scale attempt to conserve natural resources started with the first reservations of forest lands in 1891. This period marked the beginning of federal administration of grazing lands although range use or grazing was considered of secondary importance in management of national forests. It was not until 1934, with the passage of the Taylor Grazing Act that some form of control was finally brought about on the remaining western range lands.

Range management does not comprise a specific field of knowledge, but is closely tied in with many related fields such as plant and animal ecology, animal husbandry, soils, botany, and others. All of these form a part of the background for scientific and everyday range management as we know it.

We must have a working knowledge of range livestock, how they react to various conditions, what areas they prefer in grazing, the type of water developments needed for each, and many other things. The same factors apply to game birds and animals and the field of wildlife management is so closely tied to range management as to be almost indistinguishable in many ways.

From an ecological standpoint, we should know the approximate stage of plant succession that our ranges are in; what indicator plants are and what they tell us of range trend; and what we may expect in the way of improving vegetative conditions under proper range management.

Finally, from the economists standpoint, management of the range must be tied in with the management of associated private lands. Every new management principle is apt to have an economic effect either good or bad on the lands or land users for whom it is proposed.

To obtain proper management on a given unit of range, some of the things to be determined are: (1) An inventory of the range to find its present carrying capacity and ecological potential. (2) The present stocking, or numbers of domestic stock and game using the range, along with the seasons of actual use, and an early determination of any critical areas from a range use standpoint. (3) The influence of climatic factors, such as amount and type of precipitation and when it usually occurs. (4) Physical characteristics such as topographic barriers, if any, distribution of available live water, dry or desert areas, rough or mountainous regions, and any others which may be expected to influence use of the range. (5) Soil and erosion conditions as affected by livestock or game use. (6) Water or land ownership pattern or status. (7) Some lesser factors which may be very important locally, include predator populations, areas of suspected poisonous plants, and areas of excessive rodent populations.

Some of the tools of management by which we may influence the trends of range conditions include, first, proper stocking accompanied by water development, drift fences, trail construction, proper salting, and range revegetation. The important point is to obtain full production without starting on the path of diminishing returns from over-use, as has been the history of the past.

Range forage or vegetation is a constantly changing thing, seldom, if ever remaining stationary. Sometimes the changes are very gradual, being hardly noticeable unless the Range Manager keeps detailed records on check areas. Other times a change may be very rapid such as the invasion of annual grasses or weeds following a fire.

An important part of the management of ranges which will tend to increase in the future is the accent upon their multiple use. We must remember at all times, however, that our administration of public land is predicated on priority of public interests and all special interests must be relegated to secondary importance.

Finally, because so many other things depend upon our ranges being preserved, we must at all times keep aware of these dependent interests such as watershed, power sites, etc.

If we can keep our minds flexible and our thinking clear and open to changing conditions and problems, we should be able to maintain and improve our range lands for the future benefit of the nation, while at the same time carrying out the purposes of the Taylor Grazing Act.

Range Surveys
By Myron H. Allen

The various definitions of surveys were given beginning with "range reconnaissance, to forage inventories, and finally to a tabulation of the quantity, quality and location of range resources recording not only vegetation and soil, but cultural and physical features as well." This progression in definitions is comparable with the increased demand for information and uses the survey data is being used.

The uses of range surveys are:

(1) Secure uniform data for grazing adjudications.

(2) Make a record of the range resources and vegetative and erosion trends.

(3) Develop better maps.

(4) Train new range technicians.

In a discussion on the above, it was brought out that resurveys were not necessary, but should be followed with actual use and condition checks. Also that the range or area manager should determine the type and intensity of range survey to be made on any area needing surveys.

Adjudication of Grazing Privileges (Water Base)
by Myron Allen

The mechanics of adjudications of grazing privileges under a water base was explained. The priority of consideration as given in the code was explained - namely:

(1) Free use

(2) Full-time prior water

(3) Full time water

Several examples were diagrammed and among other regular procedures the application of aggregate waters, disposition of lands additionally available, and areas serviced jointly by competing waters were explained. Complications that have been encountered were explained.

Dependent Property Surveys
By William J. Malencik

Dependent property surveys as heretofore defined are necessary inventories and they play a primary role in the adjudication of grazing privileges, ranch sales, and

transfers of grazing privileges. The classification of dependent properties as they existed in the past as well as they exist today was discussed. The dependency by use or priority of land is limited by three factors covered by Section 161.1, paragraph (g) of the Federal Range Code.

It is the duty of the Range Manager after submitting the matter to the advisory board to classify base properties on a broad phase to ascertain if such lands are qualified in accordance with the code for grazing privileges. Sources of information which may aid the Range Manager in classifying these lands include the Advisory Board, material submitted by the applicant, decisions, county records, mortgage records, and records of other agencies. If the property is qualified then a dependent property survey is made, the intensity of which is solely dependent on prevailing circumstances. Grazing privileges are allocated on the basis of dependency by use of the base lands during the priority period, or its commensurability or productivity, whichever is lower. If the priority is the governing factor, then an intensive property survey is not necessary. Salient points to record in a dependent survey include the common name of the property, type of land control, legal description of the property, total acreage including the acreage of various feeds, forage and cultivated feed production, amount of feed consumed by range livestock, and general significant points of the particular operation. These data are tabulated, dated, signed, and source of information indicated for each qualified applicant.

The base property requirement and method of determining same was discussed, and the general method and information necessary relative to converting feed crops and forage production into AUMs. These aforesaid data are necessary requirements in analyzing the dependent property survey results.

In addition to the above tabulation for each qualified applicant, an additional tabulation on a grazing unit basis is constructed from the information obtained on each study. When these data are analyzed, they will reveal in addition to other information the total qualified demand according to preference for any given unit.

In concluding this subject, the speaker observed that base properties are the basis for issuance of permits and licenses and if the holder thereof loses control of all

or part of his base lands, or the productivity of the same is decreased, then the dependency of use shall be reduced proportionally. Of course, such action would conform to the procedure as covered by the code.

Adjudication of Grazing Privileges (Land Base)

By William J. Malencik

Grazing privileges within the meaning of Sec. 3 of the Act are adjudicated as soon as essential data can be obtained and analyzed to qualified applicants in accordance with the code. Two general methods of adjudicating grazing privileges were explained which are as follows:

(1) Agreement among qualified applicants yet in accordance with the necessities of the code.

(2) According to qualified demand as revealed by the dependent property classification, survey, and report.

Of paramount importance in addition to an inventory of forage demand is an inventory of the available forage on Federal lands. Analyzing the available forage with the qualified forage demand would result in adjudicating privileges to qualified preference applicants with an eye toward conserving and promoting the highest use of public lands, stabilizing the livestock industry, and promoting the proper use of patented lands dependent on the Federal range.

All information heretofore relayed concerning dependent property surveys, period and maximum period of use on Federal range, base property requirements, other important uses such as game use and recreation use, and inventories must be considered diligently in adjudicating grazing privileges on a land base. The establishment of allotments and allotment lines is an administrative function and the outgrowth of adjudication.

Applications, Appeals, and Hearings
By William J. Malencik

The above subjects were discussed and mention was made that the topics are explained in detail in the Federal Range Code. The procedure involving applications, protests, appeals, and hearings and purpose for such was explained. The Range Manager's action was particularly emphasized in all of the above subjects.

Licenses and Permits, Fees, Rules of the Range and their Enforcement
By Virgil Pate

The discussion was opened with a quotation from the Taylor Act which is the authority and basis for issuing permits and licenses.

Free-use licenses and permits were emphasized on the basis that they not exceed domestic use. Mention was made of regular licenses and permits with their respective order of issuance, terms and conditions which must be met and their limitations, stating which lands are administered by the Bureau of Land Management and the adjudication of each and the temporary suspension of a license or permit which is available to those called to the military service.

Fees: Time of Payment: Refunds: No fee is charged to the free-use permits but on regular licenses and permits, a fee is charged for each head for each month for all animals over 6 months of age on Federal range with an improvement fee which varies from one District to another according to the approval of the recommendation of the Advisory Boards. Crossing fees are charged on all animals on driveways and trails at a specified rate. There is no refund in fees paid except in cases of drought, certain natural causes and epidemics and/or suspended licenses of service men.

General Rules of the Range. This topic consisted of a discussion of the acts prohibited on the Federal range with respect to the procedure of penalty which may bring about a reduction in the permit or license.

Procedure and Enforcement of Rules and Regulations. When a wilful violation is apparent, a notice is caused to be served by the Manager in writing stating the Acts violated. An outline of the procedure of handling an offer of settlement or taking legal action was followed through. This brought out a discussion of a new Trespass Law enacted in New Mexico legislation this year, giving a 48-hour disposal of stock after notice has been given to the owner.

Attention was called to the possible future over use that can be caused to the range by a recent practice of feeding accepted in the southern districts of New Mexico, especially. This practice involves feeding salt and meal, mixed together, as a supplement feed, which helps to concentrate stock on areas wherein previously the cattle would have been moved out because of lack of feed. In following this practice, cattle are held on the range until destruction is becoming a problem.

Advisory Boards
By Kieth E. Norris

District, State and National (Activities other than grazing applications such as Range Improvements, S&M and Grazing fees. The Taylor Grazing Act includes the authorization for Advisory Boards under Section 18. Thus it is possible for the Range Managers and higher officers to have the benefit of the fullest information and advice concerning physical, economic, and other local conditions.

Each Advisory Board is composed of from 5 to 12 members. The members are nominated and elected by their fellow permittees as prescribed in the Federal Range Code. The free-use permittees may also be represented by an advisor elected from among the free users of the District. An advisor is appointed by the Secretary of the Interior to represent the wildlife interests of the District.

Section 4 of the Taylor Grazing Act provides that improvements necessary for the care and management of permitted stock may be constructed on the Federal range. The application and permit for such construction must be recommended by the Advisory Board and approved by the Range Manager. Stipulations necessary for the protection of the interests of the Government and other permittees are included on the application and permit.

Construction and maintenance of Range Improvement projects is an important part of a grazing District's activities. The Advisory Board's approval of projects is evidenced by the board chairman's signature on the proposed project. Because of years of experience, Advisory Board members are able to offer sound and considered advice on range improvements. They are interested in location, cost, necessity, permittee cooperation, etc., on projects. The same general factors apply to Soil and Moisture projects.

Although it is not necessary to bring to the Board's attention such matters as homestead applications, exchanges and isolated tract applications, many Range Managers prefer to do so. Much valuable information can be received and better relations are fostered between the Board and the Range Manager.

The State Advisory Board is composed of cattle and sheep representatives from the various Districts in the State. They consider and make recommendations on grazing administration policies or problems affecting the state as a whole.

The various state boards select one cattle representative and one sheep representative to attend the National Advisory Council. The National Council considers and makes recommendations on grazing administration policies and problems of national scope.

In the fall of 1950, the National Advisory Council, the various state and district boards were presented with a proposal for an increase in grazing fees. An increase of 4¢ an AUM was forthcoming. A great many factors have to be considered in any Bureau of Land Management grazing fee discussion. These factors include investments, type of range, cost of administration and many others.

Wildlife and Recreation. The past several years have brought about an increase in wildlife problems. Increased game populations and hunting pressures are partly responsible. It seems evident that the time is at hand when certain long-standing problems must be considered and settled.

In the various grazing districts and on Section 15 lands, some forage allowances have been made for wildlife.

The important question on numbers remains to be answered. Until this problem is faced and threshed out, confusion and misinterpretations are inevitable.

Additional research is needed on various phases of wildlife activities. Especially necessary is information in regard to numbers, feeding habits, areas of use, etc.

In the western United States, winter range is often a limiting factor. This is especially true for deer and elk. Checks must be made to determine if forage is becoming depleted. In winters when deep snow conditions exist, losses are often extreme on over-grazed ranges.

Sportsmen obtain recreation from the hunting of wildlife that spend part or all of their time on Federal range. The enjoyment of scenery may be considered as recreation

Administration of Grazing Leases
By Edward C. Booker

The first half of this discussion was taken up by a brief review of the grazing lease program covering in a general way, filing of applications, adjudication of applications, disposition of protests, issuance of lease, rentals, renewals, assignments, and management plans including provisions for wildlife.

The second half was devoted to the discussion of problems, suggestions for the improvement of the administration of grazing leases.

The suggestion was made that inasmuch as most of the range management districts now are maintaining status, there was no longer a need for serialization and recording of leases in the land offices.

The suggestion was made that the present method of assignment was not as satisfactory as the use of an assignment form for this purpose. This is particularly true in cases of partial assignments and also in the case of paid up ten-year leases.

The inconsistency of a recent memorandum from the Washington office to Region I criticizing the Area Manager for not following principles established through a decision dated subsequent to the Area Managers decision was discussed.

The increased clerical work load in the District office occasioned by leases and the comparatively small amount of revenue received by the Government from grazing leases was a subject of concern to many of those present.

Utilization Checks
By J. R. Penny

If we are to have a thorough current knowledge of stocking capabilities and the trends of vegetation under our management, we must of course make thorough studies and records of those trends. Also, in order to acquaint persons with what our accomplishments are, the necessity of keeping records is only too well evident when we realize that the lack of having kept them in the past is prohibiting the Bureau of Land Management now from statistically showing its accomplishments in terms of increased forage production. This is done primarily through the use of utilization checks. There are several methods of judging range utilization including random estimates or percent of use made of all forage, judging use made of certain indicator plants, judging results of use by relation to condition of livestock, and judging volume of forage left or taken after grazing.

Each of these methods may be used in varying degrees of refinement depending on the use to which the information is put. In the Bureau of Land Management we deal with such vast acreages and with so few employees, that our studies must generally be on the extensive side. The form exhibited here is a "Field Report of Range Conditions" intended as a rapid means of recording, by check marks and short narrative, in generalities the pertinent elements affecting range conditions as indicated.

For more detailed range studies, the Bureau of Land Management in general use the so-called "Deming Method." As stated by Mr. Deming, "This method is based on the principle of recording at the close of the grazing season, specific information about each of the main forage plants which carry the principal load of grazing use on a

range area, describing briefly the other factors which influence the use made, and considering all these to reach a conclusion which assigns the area to one of nine described classes of degree of use. ---After the conclusions reached for the several observation locations within a unit have been summarized into a consolidated report for the unit, the findings are compared with data on the actual use made on that unit by livestock during the preceding grazing season. From these results significant carrying capacity figures may be determined for the unit."

The field report of range conditions serves well in providing a general overall picture of range conditions and should bring to attention any problem areas. These problem areas should be covered by the Deming method or some other more detailed method which more accurately appraises the situation and will serve as a solid basis for support of management action.

Range Management Plans
By J. R. Penny

With activities and associated problems of the Range Manager being so vast and available personnel so short, a real planning job must be done if current and long-range problems are to be recognized, objectives determined, and a program for their solution drawn up and put into operation.

At present we must recognize the unfortunate situation of having most of the Range Managers carrying a vast amount of vital planning information around in their heads with relatively little of it being put in record form. This information is, of course, lost whenever the individual leaves the job.

Since grazing districts are so varied in character and problems, close uniformity in preparation of plans can hardly be expected. Then too, it is desired that the Range Manager maintain his personal initiative and originality in preparing the plans. However, the Regional Office should at least standardize procedures in preparation of range management plans by providing an outline to serve as a check list to aid in complete coverage of the management plans of a unit and prepared in reasonable uniformity.

Management plans should be drawn up by administrative units. The boundaries of these units would be determined by any combination of factors that tend to cause an area to be subdivided administratively from the remainder of the District. Such factors would include topography, elevation, vegetation, season of use, class of stock, land patterns and stock associations.

One of the most serious handicaps in the development of range management plans is the lack of adequate information on our range resources. Not only do we need information on grazing capacity but on the location of existing improvements and feasible sites for needed future range improvements such as reservoirs and reseeding projects. In some areas there is inadequate information of record on location of water, fences, natural barriers and such information affecting the movement of livestock.

The test of a good range management plan is its usability -- not only to the person or persons responsible in preparing the plan, but for those who follow as well. The purpose of any plan is to maximize effectiveness, efficiency, and economy.

The primary elements that should be included in a range management plan are:

(1) Identifying the problem

(2) Fixing the objectives

(3) Measuring the existing situation (collection of data)

(4) Program of action

The primary objective of a range management plan should, of course, be the conservation and rehabilitation of the Federal range, and to assist in stabilizing the livestock industry dependent on it, and to provide forage and habitat for a reasonable amount of wildlife and game animals.

It is to be hoped that the preparation of the program plans and range management plans will be so coordinated as to eliminate waste motion because of duplication of effort.

The following plan prepared as an outline for Region III, you will note, is not intended to be just a range management plan, but is a District Management plan taking into consideration all the District activities.

Exhibited is an outline guide for "Administrative Unit Management plans for Grazing Districts." The plan is made up of a narrative part and graphic part. The narrative part is separated by functions of range management, wildlife management and recreation, range improvements, and land planning. Each of these functions is analyzed and programmed according to the formerly mentioned primary elements.

The graphic part is made up of three maps:

(1) A base map to include all permanent features, e.g., completed range improvements and permanent water.

(2) An overlay to include proposed and changeable features, e.g., allotment boundaries and proposed improvements.

(3) Land status map.

Range Management Plans
(Southwest)
By Myron H. Allen

Range management plans in the arid regions of the southwest are composed of a work sheet, base property rating sheet and allotment map. The plans are set up by individual allotments. The work sheet shows acreages and grazing capacities by land ownership. The base property rating sheet shows areas and grazing capacities of Class I and II waters that service the entire allotment. The map shows land status in each section, improvements, physical and cultural features in black. Proposed improvements are shown in red. All factual data is shown in prepared columns at the bottom of sheet, as well as proposed land pattern adjustments and changes in class of stock or season of use. The information thus collected is included in program plan with a further breakdown between improvements needed for livestock control and improvements for erosion control.

Area Managers Responsibilities
By H. B. Rathner

The present policy of increased delegation of authority to the field offices is causing the Area Manager to be more responsible for all of the various phases of activity within his area of administration.

The Area Managers responsibility toward the range improvements is mainly that of long range planning and the careful development of those plans. First, the designation of working units over the entire area and then the assignation of development priority to these units through an acquired knowledge of the area and close cooperation with the interested land users, which are the stockmen. The Area Managers responsibility is mainly that the improvement program is well planned and that the improvements will definitely provide for better distribution of livestock acting to cause a proper utilization of forage over the maximum area while providing for the alleviation of use in the exist- critical localized areas.

The Area Manager has the complete responsibility to curtail all trespass to the minimum possible within his economic means and personnel limitations. He is to distinguish between a deliberate wilful trespass and a trespass which may be prevented by proper adjustments in range management. He should cooperate with the users of the public domain lands to the fullest extent to alleviate any conditions tending to cause non-intentional trespass. In all instances of reported or discoverable trespass it is the Area Managers' responsibility to make certain that all possible information is secured which will lead either to the dismissal of the reported trespass or to the successful prosecution of the offender and a final submission of an acceptable proposition of settlement.

The Area Manager is responsible for the setting up of sound fire prevention plans which will cause the least amount of acre burn possible. Included within these plans will be the securing all possible cooperation from the city and county organizations and other Federal agencies within his area. He will also secure as complete as possible cooperation from the users of the public domain lands and from the general public. All sources of public education through talks, press releases, and radio media should be utilized.

The Area Manager with his intimate knowledge of his administrative area is the person best suited to long range land use planning. He should provide a plan so that in the future the best possible use is made of each acre of soil. This includes the planned disposal of isolated tracts, the program for blocking of public domain lands through Section 8 exchanges, the planned reservation of wildlife, recreational, and watershed areas. This program is to be carefully planned in complete cooperation with all State and Federal agencies and land users so that the best possible use of the land can be made with the least amount of hardship to any single faction.

It is the Area Managers responsibility to protect the forest resources upon his area from misuse and possible extinction while at the same time to promote their beneficial use on a sustained yield program through sound planning. This will include the handling of timber and other forest products sales and the supervision of the harvesting operations to a successful completion.

In conclusion then it is seen that the Area Manager today has the overall responsibility to make certain that there is a long range beneficial improvement program; that trespass and fire are held to a minimum; that there is a definite program for land use; and that the forest products upon the area shall be managed under a sustained yield program.

Area Management Panel Discussion
By J. R. Penny

The BLM is charged with the responsibility of carrying out the provisions of hundreds of laws for the administration and conservation of unreserved vacant Federal lands, lands with a multiple of uses. To the man in the field goes the administrative responsibility of putting into effect the policies, procedures, rules and regulations that have been passed all the way down from above to carry out the intent of these laws. He is recognized as the agent of Uncle Sam charged with keeping abreast of the problems of interrelated phases of public land and resource conservation and management. To a large extent the success of BLM administration rests with him.

In many areas the "man in the field" now often unofficially called the area manager, is the Range Manager. In other areas it is the Forester. While operating under the supervision of the Regional Administrator, the area manager is at the same time the on-the-ground representative of the Director and the Secretary in dealing with the general public. The standing of the Bureau and the Department in the eyes of the public within his area of responsibility will often be measured by the calibre of the area manager, the character of his official dealings with the public and frequently his personal conduct. He must have breadth of knowledge of the land and its management needs, sympathetic understanding of the problems of the users, skill in dealing with the public and resolving management problems, reputation for honesty and fair dealing and the ability to get the job well and expeditiously done. When we think of all the major functions of the job, including forestry, classification for land disposition, land planning, range management, range improvements, soil and moisture conservation, wildlife management and recreation, we realize how great a responsibility this area manager has.

He cannot be expected to be a technical expert in each and every field under his administration. He is to become a generalist. He must secure technical assistance from employees to be attached to his staff and from officers of the various divisions in the regional and national offices

Of course we cannot think of area management as above described, an accomplished fact. Rather, it involves an evolutionary process having to do with such elements as training of personnel, rotation of assignments, delegation of authorities, development of procedures, and budgetary authorizations providing for allocations according to administrative functions.

The personnel promotional aspects of area management are not considered to be limited to any one group of individuals but rather considered to be on a basis of demonstrated administrative abilities acquired in various fields of our activities.

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Following this discussion, Mr. Morgan briefly talked about area management from a regional standpoint; Mr. Bridge about area management in the northern area; Mr. Allen about area management in the southwest area.

DISCUSSION PRELIMINARY TO FIELD TRIP TO
CENTRAL OREGON LAND UTILIZATION PROJECT
September 11, 1951

William Anderson, Oregon Range Conservationist (SCS)

This presentation will serve as a broad introductory statement from which Mr. Currier will discuss the management and conservation program in effect on the Central Oregon Land Utilization Project south of Madras. The discussion on range conservation is applicable principally to the northwest bunchgrass type of range.

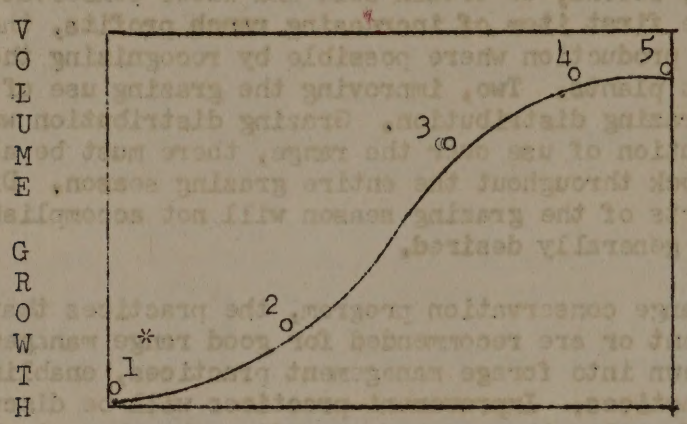
Range management has two primary objectives. First, to increase ranch profits through more pounds of livestock products produced per acre of range or dry-land seedings; and, second, to obtain soil and water conservation through range improvement. Under the first item of increasing ranch profits, there are two methods. One, increasing forage production where possible by recognizing the growth requirements of the key forage plants. Two, improving the grazing use of forage now produced by improved grazing distribution. Grazing distribution was discussed. To obtain optimum distribution of use over the range, there must be a continuing distribution of livestock throughout the entire grazing season. Distribution of livestock for small parts of the grazing season will not accomplish the distribution of grazing use that is generally desired.

In the SCS range conservation program, the practices that are accomplished for good range management or are recommended for good range management are observed. We have these broken down into forage management practices, enabling practices, and special improvement practices. Improvement practices will be discussed first. Seeding or reseeding, fertilization, water spreading, brush control, noxious plant control, and livestock pest control, are a part of our program. You will see considerable work that has been done on the Central Oregon project on seeding and reseeding, and on brush control. Next you will see some of the enabling practices. These include salting away from water, water development, fencing, riding, supplemental pastures, winter feed reserves, roads and trails, and fire protection. Bill Currier will explain these more in detail, but I would like to call your attention first to our salting program. The Gray Butte Grazing Association hires the rage rider who handles the livestock on the project and he is responsible for salting the cattle. He has from his experience come to realize that you have to first salt the cattle and then salt the grass.

Under the forage management practices, all of you know the importance of the proper season of use and the safe degree of use. We have the practice also of rotated-deferred grazing. The term "rotated-deferred grazing" has caused a lot of confusion during recent years. G. D. Pickford of the Forest Service described it accurately when he said that "In the rotated-deffered grazing system, you rotate the deferment, you do not rotate the grazing." The system calls for a rotation of deferment with the rotation of grazing being made during the growing season, not the grazing season. For example, in a three-pasture rotation with a spring, summer, and fall use, you would go first into pasture one for one-half of the spring season, then into pasture two for the last half of the spring season and the first half of the summer season, thence into pasture three for the last half of the summer season.

and the first half of the fall season -- then you would return to the first pasture for the last half of the fall season to complete your rotation for that grazing season. In the fall grazing season, inasmuch as pasture three had been deferred, it would receive the initial use in the spring in a rotation pattern that would defer the grazing use of pasture one or pasture two for the entire spring season. At the end of your second grazing season, this would leave one of your three pasture without spring use. Accordingly, such third pasture would receive the initial use at the start of the third grazing season and adjustments in seasonal use would be made to rotate the use to all three pastures. The basic part of the controlling factors which govern rotated-deferred grazing is best described in the growth curve of the plants. The growth curve is referred to by plant physiologists as the "S Curve."

PLANT GROWTH CURVE (S CURVE)



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1. Growth Starts
2. Range Readiness
3. Stalks
4. Seed Matures
4. Growth Stops.

"Management and Conservation Program on the Central Oregon Land Utilization Project"

William F. Currier, Project Range Conservationst (SCS)

We are an operating agency and are responsible for the application of management and conservation principles. In the project area we have 110,000 acres and 150 permittees, 10 of which are bone fide stockmen. One hundred and forty of the permittees are mostly farmers or are people in other lines of business with livestock being a sideline. The entire project area is covered by an operating agreement with the Gray Butte Grazing Association. We are responsible for technical assistance in range management and for all new construction in connection with range improvements on the project. The association is responsible for the management of the livestock on the land, handling the cattle, and for maintenance of existing range improvements.

In the southwest corner of the project is a three-pasture unit which is relatively dry and is used as spring-fall range, offsetting Forest Service permits used in the summer. In the south end is another three-pasture unit of roughly 10,000 acres which is in broken-hill country. In the southeastern unit are four pastures and it is operated as a later cow-and-calf operation. It is higher country and a later calving season. In the south-central unit are three high-producing pastures that are used as a steer operation for about 700 steers. The average gain during the first 70 days of the grazing season this year was two pounds per head per day. Farther west is a five-pasture unit which is our biggest problem area because it is used in common with 800 -900 head of cattle by 52 farmers whose base operations are on small, irrigated farms. North is the cow-calf unit. Then farther north are the two pastures intermingled with private lands and one sheep allotment. The north pasture is relatively undeveloped. On the west side is the heifer unit made up of three pastures. Heavier use is made on two of the pastures with one pasture being used for buffer purposes for use when water fails or when a fire hits. Sometimes it is used also for holding pastures for a few days.

Our first problem is adequacy of stock waters: wells, storage tanks, springs, etc. We are using a a storage tank 6' x 7' x 12', which is better than the taller, cylindrical tanks which have proven to be targets for trigger-happy hunters.

Our next biggest general problem is the control of big sage and rabbitbrush. The big sage is easier to kill and is easier to control than the rabbitbrush. We have found that grass, even though it may be well managed, is not enough to control brush. Seventeen thousand acres of abandoned farm lands are still to be reseeded. Mowing helps control the larger brush, particularly if it is accomplished during the late bloom season in June and July, but it does not control the smaller brush. Mowing or beating is more effective in the late bloom stage than in the early bloom stage. Spraying with chemicals on regrowth looks promising, but it has not been tested as yet.

Another problem is distribution. We are using salting, riding, and fencing as means of getting effective distribution. General observation indicates that it is foolish to place salt away from water in any area where it can not be found readily by the livestock. After the cattle start going in a particular direction from water to a saltbed, which they know, that saltbed can then be moved farther out from water or can be moved gradually so as to change the direction in which the cattle go out. The proof of the value of these practices shows up in the weights of the cattle at the close of the grazing season. Another important result of good distribution is the condition in which the vegetation is left at the close of the grazing season

"Field Trip to Central Oregon Land Utilization Project"
September 12 and 13, 1951

September 12, A.M., trip from Squaw Butte Station to Madras. September 12, P.M., and September 13, A.M., field trip over Central Oregon LU project conducted by Messrs. Anderson and Currier of the SCS for BLM, with stops scheduled in various pastures to point out and explain the management program on the ground. A mireographed program was provided each conferee for ready reference.

September 13, P.M., returned to Squaw Butte Field Conference with stop in Horse Ridge Unit of Oregon Grazing District No. 5. District Range Manager Thaye discussed grazing district operations with questions and answers regarding individu allotments, seasonal spring and fall deer migration, Section 8 Exchanges on administrative stock driveway, Exchange of Use lands and licenses, seasonsal sheep movement to and from National Forest, range improvements, S&M conservation operatio fire control in high-fire hazard area, recreational uses, timber (posts, mine timbe and free use permits), and reclamation lands by agreement -- all in the imediate vicinity of the stop.

SOIL AND MOISTURE
September 14, 1951

Soil and Moisture Conservation
Harry Pearson

Conservation is not a particularly new term or concept. Likewise the need for conservation has long been felt. This need was crystallized into action with the passage of the Taylor Act of 1934, and the Soil Conservation and Domestic Allotment Act of 1935. Present-day Soil and Moisture Conservation activities of the Bureau of Land Management are authorized under these acts which are intended to provide permanently for the control and prevention of soil erosion and to thereby preserve the national resources.

Specific objectives in the Bureau of Land Management are: (1) The rehabilitiation and protection of the public domain needing conservation measures beyond those afforded by proper management. (2) Retarding erosion and the abatement of sediment as it relates to both on-site and off-site benefits. (3) The continuation of such programs to provide for stability under proper use.

Strong emphasis is given to the part that management plays in the overall Soil and Moisture Conservation program. In the long run the range user must be the one chiefly to effect conservation by continuing to make proper use of the resources. The best obtainable vegetal cover is an essential part of the conservation objective. The construction of detention dams, waterspreading, reseeding, fencing, stock water developments, etc., are examples of conservation land treatment measures needed to effect immediate reduction in soil erosion and to enhance a necessary rehabilitation of the forage cover to make more permanent the erosion reduction that is obtained.

Experience to date in our work program and the appraisal of similar activities by other agencies leads to the conclusion that we should have high quality a construction objective. Well planned and soundly executed construction projects last longer, require less maintenance and function more successfully.

The effective integration of all Bureau of Land Management activities is a "must" if Area management is to succeed. Charging the functions for the work accomplished makes it possible for the area manager to establish efficient operation. Technicians may be assigned any task that

they are qualified to accomplish.. The Area Manager must not be prejudiced in his interest, thus favoring one activity for another. Particularly is this true of the Soil and Moisture Conservation program since construction funds as well as other funds are apportioned quarterly and must be encumbered for projects within the fiscal year of appropriation.

Now that the range improvement program is also a responsibility of the Soil and Moisture Conservation branch, there is excellent opportunity to correlate the construction program for maximum accomplishment. It should be remembered, however, that it is the erosion problem on the range land, and not the individual user of the range that determines distribution of the Soil and Moisture funds. Satisfying individual requests for improvement projects can be achieved by proper allocation of the range improvement and Advisory Board funds. But if the conservation objective is to be achieved, we must at all times give direct consideration to the needs of the range land in preference to needs of the range user.

What is Conservation? By dictionary definition, conservation is "to keep in a safe and sound state." We in the Bureau of Land Management agree that we want to keep the public domain ranges in a sound state. This does not necessarily mean nonuse. In fact, we all know of instances where proper use has resulted in improvement in the forage cover, as well as we know of instances where nonuse for a period of time may be essential to recovery.

Too often, however, there is a notion among nonusers that conservation implies the withdrawal of range from use. Too often, also among users, there is a disinterest in benefits not directly related to their own needs. Neither are inclined, therefore, to see the larger problem -- that of waste, which may involve nonuse as well as overuse. The idea of the inexhaustibility of the public land resource was probably responsible for much of the overuse that has occurred -- use that has taken from the land not only its increment, but in addition, frequently using the principal as well, a view understandable if deplored, during the years when the frontier was a fact. The error of retaining a concept such as the frontier beyond its excusable historic generation is evident in the loss of much topsoil from ranges already insufficient.

The untrained observer, who is frequently the one to proclaim most loudly against alarm in this regard may not be able to detect deterioration of the ranges as even in process. And the concepts of the earth as self-renewable, of erosion as geologic, and therefore out of the possible interference of man, have been responsible, as with the concept of the frontier as inexhaustible, for much unawareness of change. If not more completely reckoned with this unawareness of man's role in initiating and continuing the downward cycle may be the determining factor in further serious depletion of the ranges.

The insidious matter of a degrading plant succession is a case in point. The brief life span of one man is not enough, even if memory were a reputable guide, to perceive a change that may have been occurring for a century. To the ordinary observer, the range may seem year after year to be green in about the same proportion as the season before, even though a drought cycle is involved and even though pressure upon the edible forage is increased. The green cover, however, may be a nutritive plant or it may be the worthless snakeweed or one of its eager kin that deceives the eye with a showing of reassuring color.

A range begins to deteriorate when the balance between plant and animal life in the biotic community is upset. Recovery depends upon the conscious reestablishment of that balance. Management, as an aspect of conservation practice, enters here as a most important development in the concept of conservation as a way of viewing the resources as in need not only of maintenance, but of extension as well. Range improvement beyond the expectation of those who remember the "good old days" is more than a possibility under effective management. Moreover, an improvement in the condition of the range lands will relieve many problems that distress the farming areas along the main river channels where another type of imbalance menaces continuity of production.

Sediment, the number one enemy of the irrigation farmer, implies a denuding range. The Bureau of Land Management should and does consider the problem to be one of the watershed in its entirety. Furthermore, if conservation is conceived as involving but one aspect of the total problem, either that of the range or that of the arable areas without reference to the other, it is fated to become deadlocked as dilemma. The larger task, if considered futile unless the entire watershed may be attached at once, is equally defeatist. A beginning must be made. The important point is that this beginning takes into account the total problem.

Soil as sediment in a storage dam is waste and both the farmer and the rancher are losers. The menace of sediment increases with the decrease of forage upon the ranges. Retention of the soil where it can be made valuable once again, if it has already lost that function through plant depletion, requires the full use of rainfall. The distribution of the little moisture which falls in semi-arid country tends to focus attention of the users and the technicians upon issues that may in the long run defeat both the rancher and the farmer. The management of water, then, is perhaps the key to the solution of a difficult problem. Some pressure groups wish to continue a condition of imbalance in the range lands under the mistaken notion that run-off above is the answer to the need for more water in the valleys. Much of the run-off in a deteriorating watershed under usual rainfall is apt to be lost in floodways that are now crowded with the symbols of pathological erosion, sloughed banks and debris. Much of this run-off is therefore used up merely to create more havoc; what does reach the storage dams is heavy in sediment. In flood years, and they do occur even though we forget about them during drought years, the already threatened valley does not need all of the run-off from above, should avoid it in fact, not only to lessen the hazard of overflowing, but to prevent the sloughed banks of other years from roaring wholesale into the dams and river bed.

There has been and still is an incomplete consideration of the problem of water. Still prevalent is the idea that if water isn't inexhaustible, and most people are now aware that it is not, then it is something to be fought for rather than shared. The fact must be accepted, however, that allocation of water must be made with the entire problem in mind. The restoration of the range is important and more acres in cotton are important. This will inevitably release rainfall for use rather than destruction. Streams that are now ephemeral floodways in the southwest were very probably at one time perennial and may, under management and appropriate treatment, become again sources of water supply that are constant and relatively free of the burden of waste in the form of sediment.

Those who do not view the problems of an entire watershed, or of that watershed within a region as a whole, are inclined to think of the cost of structures chiefly in terms of on-site benefits. Conservation values are possible to compute only arbitrarily at best. But even so, it is

well to recognize that the cost of the smaller structures, in the upper drainages, can be largely amortized during the life of the structures through increased forage and therefore increased turn-off of livestock products. Experience to date indicates that the larger dams in Region V have a life expectancy of from 15 to 20 years before the storage is replaced by silt. However, it is reasonable to suppose that through proper management of the range responsible for the silt, the life of these dams may be materially extended. This gain, in addition to off-site benefits, should provide the range manager and the technician with arguments of sufficient weight to convince even the most skeptical-minded of cost justification. The range manager and the technician, however, will have to develop far-sightedness. They will have to learn to evaluate off-site benefits, with a degree of interest proportional to the evaluation of on-site benefits. They must come to understand the necessity of increasing the vegetal cover for purposes in addition to those that only benefit the rancher involved.

The evaluation of forage land in terms of capacity is another important factor that needs examination if the criteria of full use is to be the guide and full use is conservation. Numbers as a measure of the value of a range are, like so many statistical measures, likely to be somewhat misleading. The quality of the livestock and the quality of the cover determine the turn-off to a greater degree than is generally taken into account. In the biotic community a subsistence economy provides merely for existence; surplus turn-off is precarious and unpredictable. Plants and animals alike must be able to gain more than is marginally necessary if there is to be a surplus, either for recovery of the range or for the market. The value of extending grass ranges by management over extending sagebrush through lack of management, for example, is tremendous in its potential implications. The value of a cow over the value of a horse is self-evident. Yet, within the type of product itself, there is also a wide difference in quantity turn-off by reason of the quality of the plant or animal. Some types of grass are superior to others on different ranges. Selection, through development and management, then becomes one of the major considerations in full use of the range resource.

The area manager is in the key position to make of conservation a program geared to surplus gain all around. His is more than the task of making friends with the ranchers, and of trying to maintain an equilibrium between livestock

numbers and the grazing capacity of the range. It is easy to understand that this is almost more than he can accomplish without properly distributed water facilities and the fencing of allotments. But, given these controls his function must be extended; it must become involved with appraisals beyond the needs of the rancher; he must be released from pressures that are an outcome of a limited view. An understanding of the larger problems can free him to make judgments that may very probably seem arbitrary, but he must be able to insist that adjustments be made where there are violations. If drought conditions or other factors indicate that the range is not holding its own, or is merely holding its own, he must be in a position secure enough to see that the livestock is reduced actually and not just on paper. This security depends largely on his ability to demonstrate his reasons for considering a range to be misused, not only to the often less perceptively trained rancher, but also to the Advisory Board with which he works. If the board is unconvinced, because the range manager does not transmit his understanding of the entire problem, its function may tend to become administrative rather than advisory and management thus lost to pressure elements.

Management implies the existence of interrelations in the biotic community, with man as the determining factor. Conservation as a principle, through this acceptance of human responsibility, takes into account two implications with respect to the range land base. Conservation is not conservation unless the vegetal cover, of whatever type, is used to achieve the greatest benefit possible from the resource. But, it likewise is not conservation unless it includes within the reciprocal relationship between the earth and man, the idea of perpetuity. If it is understood that the proper use of the range at the proper time by the proper livestock is a problem in need of constant adjustment, the stage is set for conservation practices that can take into account the larger problem of the entire watershed. The degree of solution of the related problems of the farming areas in the valleys is a reflection of the degree to which management in the uplands has been successful. Management is primarily an agent dedicated to the elimination of waste. Full use of the range depends upon the effectiveness of that agent, and this, I believe, is what is meant by conservation.

Cooperation between Bureau of Land Management and other Agencies

Thomas Hall

Overall individual ranching programs are involved with coordination and cooperation with several Federal and State conservation agencies; such as Bureau of Land Management, Forest Service, Soil Conservation Service, PMA, Extension Service, and many others.

Bureau of Land Management and Forest Service are, of course, concerned with management of public lands, while PMA and S.C.S. are concerned primarily with conservation activities on private lands. Extension Service through the county agent has the responsibility of coordinating and integrating all the various agricultural activities within a county.

Due to the "crazy quilt" pattern of land ownership, some type of working agreements formulated at the field level is usually necessary in order to set forth the authority and responsibility for conducting the overall program. Memorandums of understanding between agencies of the Department of Agriculture and Department of Interior are formulated at the Washington level.

From the cooperation standpoint, the agency with which it appears we will cooperate to the greatest extent is the Soil Conservation Service, the organized Soil Conservation District, and the local Board of Supervisors governing the District. It is desirable from a conservation standpoint to increase the momentum of the job and, at the same time, facilitating or decreasing the cost of operations to the Bureau, by seeking cooperation with Soil Conservation Districts which include public lands, and on which the Bureau is concerned with conservation work.

Soil Conservation Districts are legally organized state subdivisions and are formed because a state of depleted natural resources exists, ordinarily, as a result of past land use abuses.

Formation of a District is achieved by circulating and signing of a petition by the land owners of a selected area, and submitted to the State Soil Conservation committee with maps, etc. The State Committee then sets a date for a

hearing to review this data; if favorable, a date is then set for the referendum at which only qualified District landowners may vote. If resulting vote is a majority, the District is considered organized and a Board of Supervisors is elected as a governing body. Three members are elected and two are appointed by the State committee. The District work program and plan are then formulated, stating the problems of the District, what is going to be done about them, and who is going to do it. A supplemental memorandum of understanding is them drawn up with the assisting agency, ordinarily the Soil Conservation Service. The National Association of Soil Conservation Districts is now advocating the formation of "pilot districts" to demonstrate overall cooperation between all agencies involved in the conservation job within the district. One district to each State if possible.

Memorandum OLU #6 states "it will be the policy of the Department of Interior to cooperate as closely with Soil Conservation Districts as legal authority, available resources and the need of soil conservation on public lands will permit."

When the Bureau decides to cooperate with an organized Soil District, it should designate a man to contact and cooperate with the State Soil Conservation Committee to discuss plans for cooperation, and arrange to be kept informed as to any new Districts being formed and with whom the Bureau may desire to cooperate.

The District work plan and program should be revised or prepared to include provisions and requirements pertaining to development of lands administered by the Department.

Assistance of one form or another can be offered to a District by the Bureau of Land Management, depending on the type of field agreement desired. The Bureau can assist in overall surveys, District program preparations and revisions, and collaboration on specific problems of mutual concern. It is important to bear in mind that benefits to Bureau of Land Management lands are commensurate with the Department's contributions. Assistance can be supplied in the form of contributions by the Department of materials or equipment, or both.

When two agencies are cooperating with a Soil Conservation District, it may be desirable to enter into a memorandum of understanding with each other; but so far as practical, all agreements involving soil and moisture conservation should be made within the local District. Departmental personnel should cooperate closely with personnel of other assisting agencies and any disagreements or disputes should be referred to the District governing body for adjustment.

Range Waterspreading
Norman French

Definition. Range waterspreading is the diversion and use of intermittent run-off water for erosion control and the production of vegetation.

Purpose. Range waterspreading is a tool of the Soil and Moisture Conservation work. It combines the factors of erosion control with that of vegetational increase.

Erosion is controlled - (1) By reducing peak flows of run-off water. (2) By removing water from gullies (3) By reducing slope of water movement. (4) By producing a heavy cover of vegetation.

Silt is stored - (1) In dams. (2) Behind dikes. (3) On all spreading and flooded areas within the system. An average of 1 inch of silt is stored each year.

Water is stored and utilized - (1) Water is temporarily detained behind dikes and in detention dams. (2) Water is controlled within the spreading system and put or stored in the ground or soil. One acre foot of water can be stored on every acre of waterspreading.

Stored water in the soil produces additional vegetation. In many instances up to one ton of grass per acre. Checks show water penetrates to a depth of 4 to 5 feet on heavy soil.

Summary. Range waterspreading is of primary value because of its erosion and silt control. Both on site and offsite benefits. It is an economical sound

practice in most areas due to the on-site vegetational benefits alone, since land valued at $250 per acre is produced at a cost of less than $150 per acre.

Mechanics of Range waterspreading. Two things are necessary - run-off water and relative uniform land with slopes less than 3%. Water is diverted from gullies and controlled on flats with dikes. Dikes are level with borrow pits below the dike. Water moves in a syrup pan or zig-zag pattern as shown on diagram. Dike must be large enough to control the calculated peak flow of water without failure.

Some 12,000 acres of waterspreading is completed in Region III with a potential of more than 100,000 acres. 40,000 acres of Government lands have tentative agreement requests from ranchers for waterspreading cooperative work where they (the rancher) pay 30% of the cost.

Range waterspreading controls erosion, builds new land, at half the cost of old land.

Range Reseeding
Norman French

The seeding of introduced and native grasses to improve range land has proved to be very important.

Certain factors stand out as principles in seeding, (1) Seed should be planted on a firm or hard seed bed. (2) Seed should be covered but not more than 1/2 inch deep. (3) Competition must be removed during the early growth period of the grass. (4) Grass must be seeded when it will have a good chance of survival; (a) early fall, (b) late fall, (c) early spring. (5) Where possible a mulch of non-competitive vegetation such as stubble, dead brush, dead weed, litter, etc., should be maintained. This is essential where wind is a factor.

New seeding equipment is needed for adequate reseeding of many range lands. Drilling or broadcasting are not essential if the principles are accomplished.

ALASKA

Virgil T. Heath

The Bureau of Land Management in Region VII, Alaska, manages and protects the greatest acreage of forest under one department of the U. S. Government.

Lack knowledge of what Alaska has in forest resources, their location, amount, quality, merchantability, accessibility, is at present a terrific barrier in the road of proper management. Most statistics as given are based upon the best guesses of many people with local knowledge and many years of experience in Alaska. An extensive rather than intensive form ofmanagement is practical due to the few available personnel and the vast distances involved.

Timber Management

It is estimated that there are approximately 225 million acres of vegetated public domain land. One hundred and twenty-five million acres of this is under some type of forest cover. This area consists of 24 million acres of brush, 26 million acres of grass and 50 million acres of tundra and other cover. Of the forested area, 40 million acres carry commercial forests averaging 9 cords per acre, and 85 million acres are sparse forest supporting about 4 cords per acre. This totals up to about 700 million cords. The interior forests are mainly made up of white spruce and birch frequently mixed with balsam, poplar and aspen. The damp muskeg areas are frequented by a dwarfed slow-growing black spruce which seldom reaches a diameter of six inches. The timber in interior Alaska grows slow in comparison to that on the more favorable sites in the United States and southeastern Alaska, but it does compare favorably with the same type of trees which grow in the Northeastern United States. The more common size of spruce is 8-16 inches in diameter and 40 to 50 feet in height. Stands of much larger trees do occur even north of the Arctic Circle.

Today the stumpage prices of Interior Department timber are not as high as prices in the states, but this does not mean there is no demand for timber. Timber at present is relatively inaccessible. It has either been cut along the highways and streams or was burned in the early gold rush days. The future for timber in Alaska is bright. Large amounts of timber with the exception of cottonwood and birch will never be exported from Interior Alaska, but it is reasonable to assume that in time enough timber can and will be cut to supply the Alaskan needs.

Fire Control

Organized fire control has been needed in Alaska ever since the early gold rush days, but it was not until 1939 that an honest attempt was made to give protection to the vast area covered by timber in interior Alaska. From 1920 until 1933, the Division of Field Investigation handled Alaska fires from San Francisco. They were given only a token sum of money which allowed only the hiring of a few fire guards. From 1934 to 1939 no funds were made available. In 1939, $37,500 were allotted by Congress for the setting up of a fire organization. In 1940 only $27,000 was made available. This was not a very pleasant picture. Emergency funds

were made available during the war years and a fire organization began to take shape In 1951, $195,000 was made available. A good fire organization now exists and the future looks bright. As the fire funds became larger year by year, the acreage burned became correspondingly smaller. Prior to 1939, it was not uncommon for up to 5 million acres of area to burn over. This area has been getting smaller and smaller each year until there are now years with less than a hundred thousand acres of burn. There are more fires today because the population has trebled in the past decade. Much is yet to be done. It is estimated that about 18 million acres of the 225 million which requires protection is now receiving adequate protection.

Some of the fire problems which are peculiar to Alaska are; lack of transportation, vast distances and acreages, long days and short nights, annual precipitation of 5 to 15 inches, homestead clearing, military population and the rapid influx of settlers. This all adds to our already difficult fire problem.

ALASKA PROGRAM

L. T. Main

The Land Classification problems were discussed in general terms with explanation in greater detail devoted to the background of settlement brought about by boomtown growth in Alaska and the problems incidental thereto. Some time was devoted to the part other agencies had played and are playing in cooperation with BLM to get the best results possible. The need for classification was brought out during the discussion and the problems developing from Indian claims to the land were discussed.

The withdrawal inventory and withdrawals and Restoration program was handled as an adjunct to the discussion on this same subject by Mr. Kephart.

The background and present status of agriculture development in Alaska was presented to the group. Particular emphasis was given to the present limitations of market, market facilities transportation, labor and growing seasons.

Townsites both old and new and their problem peculiar to Alaska were presented briefly. The program developing from the Alaska Housing Authority was covered along with its possible future program that might entirely eliminate the current housing dilemma in Alaska.

The sale of small tractsin the areas adjacent to Fairbanks and Anchorage was explained as was the problem of lack of sufficient close-in land to satisfy the demand.

Industrial and commercial site sales under the recent legislation was discussed to the extent that has been accomplished so far in Alaska.

The classification of lands in the Birchwood area was brought out in detail to show some of the history of the area and the program of cooperation among the many agencies interested either directly or indirectly in this potential expansion area and BLM plans for development.

The slides of Alaska grazing areas obtained from Tal Nelson, Range Conservationist were shown and an outline of past, present and future grazing in the territory was given.

The appraisal of lands in accordance with part 20, the Bureau of Land Management Manual was discussed in some detail. The matter of assessment of city property under ideal conditions to obtain a Fair Market value was used as an example wherein all items of value are available for consideration to a very accurate degree. Explanation was added that appraisals for the Bureau seldom had all the information necessary to obtain an accurate appraisal but that experience and good judgment must be relied upon for obtaining the best appraisal possible under the many variable conditions.

The time for these discussions was necessarily limited, however, after hour discussions of problems typical to Alaska were held throughout the course of the conference.

September 17, 1951

"FUNCTION AND ORGANIZATION FOR WORK"

Virgil O. Seiser

The Washington office of the Division of Land Planning is divided into two branches; the Branch of Research and the Branch of Land Classification.

The Branch of Research is in part concerned with the compilation of statistical information on the work of the Bureau at large and on the public land resources. These data serve several purposes such as evaluation of the work load and programs of the Bureau; basis for budgetary justification; supplying factual information for legislative proposals; etc. The greater portion of this information is included in the annual report.

The functions of the Branch of Land Classification evolve largely out of Sec. 7 of the Taylor Grazing Act which provides for the classification of land for disposition under the various public land laws.

The conference on Land Planning and Classification in the Bureau of Land Management, held November 1950 sumarized the functions of land planning as follows:

1. Formulate general and specific land policies as the basis for adjustment, conservation, use, and development programs to direct the public lands into their proper use.

2. Initiate, guide, and coordinate the program plans at the various levels leading to the accomplishment of the Bureau's objectives. Establish program planning procedures.

3. To the extent necessary to implement the above, examine and classify the public lands and resources, including minerals, timber, wildlife, recreational, etc., and the resources of associated lands with special reference to physical conditions and use suitabilities. Recommendation of land ownership, operating and use adjustments and improvements needed to permit the most beneficial use and management of the public lands and resources.

4. Assemble and provide research and statistical information on public land resources, policies, plans, and programs as needed.

5. Initiate, guide, and coordinate the Bureau's inter-agency programming and operating relationships, with special reference to cooperative plans and programs for withdrawals, restorations, control and other land use adjustment measures.

Through decentralization and delegation of authority more and more of the work of the Division of Land Planning has been transferred to regional and district levels.

"EXAMINATION AND CLASSIFICATION OF PUBLIC LANDS IN ANSWER TO SPECIFIC APPLICATIONS"

Douglas Henriques

The statutory authority governing the classification of vacant public lands withdrawn by Executive Orders 6910 and 6964, or within grazing districts is found in Sec. 7 of the Taylor Grazing Act as amended. The acts provide that lands more valuable for the production of agricultural crops, or more valuable for any other purpose than grazing may be opened to entry, selection, location, or exchange under the appropriate public land laws.

The act of June 1, 1938 (50 Stat. 609; 43 U.S.C. 682a) provides for the classification of vacant public lands for small tract purposes. The regulations governing general classification procedures are found in Title 43, Code of Federal Regulations, part 296.

There are many types of applications before BLM on which field examination and classification are required so that complete adjudication of the rights of the applicant may be made. Among the types of applications for disposal of the vacant public land are: homestead, desert-land, public sale, small tract, private exchange, State exchange, State selection, color of title, Indian allotment, mineral patent, townsite, cemetery and park, and municipal airport. Applications for use only of the public land include airport leases, grazing lease, rights-of-way, and special land-use permit.

The purpose of examination and report is to get the information necessary to classify the land properly, and to set the information down in a succinct fashion. The report should contain basic information as to the application, and adequate information as to local economy, land use, status of adjacent land, public interest in the public land, physical land factors, crop land factors, grazing land factors, timber factors, mineral factors, and appraisals. From these data are developed a land suitability classification. The examination should ascertain all the physical environment of the public land to determine the inherent capabilities of the public lands for uses alternate to grazing.

The purpose of classification is to determine the highest use of the public lands in the public interest. The action of classification will determine whether to retain or to dispose of any particular piece of the public land; if retained, for what use and under what type of administration; if disposed of; whether by reserved or unrestricted patent, and by what method. A classification is not static; changing economic conditions and refinements in land use methods require that every classification over two years old be given a thorough review before being applied in a land disposal case.

Under the present BLM procedure, the examination of land and the preparation of classification reports is a function of the Range Manager (Area Manager). In the event that the manager does not have time to make the necessary examination, and assistance is given by field examiners from the Regional Office, the report of the land examination must be submitted to the Regional Administrator through the Area Manager.

In the examination of public lands embraced in homestead applications, the principal factor to be considered in determining the suitability of a given tract for classification and entry under the homestead laws is the feasability of development of the tract into a profitable and self-sufficient agricultural enterprise. The data must indicate that an entryman has better than a 50-50 chance to make a success of farming the land in the manner used generally in the vicinity.

The following reasons, among others, have been used to deny suitable agricultural classifications to land sought in homestead applications; Land which is needed for a stock driveway and for a range, and is in a reseeding project, will not be classified for disposal since to do so would interfere with an established public land management program and would not be in the public interest; sandy soil, little vegetable content, low productivity, and greater value for grazing and timber use; evidence of rockiness and sandiness of soil, prior entries failed, and surrounding lands removed from cultivation by their owners; lands not cultivable in the absence of water, and there being no evidence that there is wate available for use on the land applied for; the land is not suitable for crop production (this reason should be amplified with considerable substantiating data); the land is better suited for disposal under the small tract program of the Bureau the land applied for is not a self-sufficient economic unit.

Public sale applications may be denied a suitable classification for the land they seek on the following, among other, grounds: disposal of the tract would interfere with the public lands ownership pattern in the area (this interference may be with a Forest Service land acquisition program, as well as with BLM programs); sale would interfere with established operations of a grazing leassee under Sec. 15 of the Taylor Grazing Act; disposal would eliminate winter grazing range for elk or other wildlife; disposal of the land would close a stock route leading to the only livestock loading facilities in the area; land within a grazing district will not be offered at public sale where the land ownership in the area is checkerboarded, and the exchange of such land for privately-owned land in another locality would aid in consolidating the administration of the grazing district (in this connection, it might be mentioned that land exchanges are favored over public sales of isolated tracts when the public land programs of the Department will be furthered by the acquisition of the offered land).

In the classification of lands as suitable for desert-land entry, the question of water is the most important single factor to be considered. The land sought must be arid, non-timbered, non-mineral land suitable for reclamation and agricultural cultivation by means of irrigation, and in addition, the applicant must show a satisfactory source of water supply adequate to irrigate all of the irrigable portion of the entry, if allowed, and a feasible plan for irrigation of the land.

In the examination of lands involved in exchange applications, it must be borne in mind that exchanges of land are permitted only when interests of the United States will be benefitted thereby. It is not enough that no public interest will be damaged by an exchange, there must be a positive benefit to the United States. No exchange may be permitted if the classification reports show a greater value to the selected land than to the offered land.

No arbitrary conclusions should be drawn in connection with any case for examination. All classification recommendations should be supported by logical conclusions derived from a study of all the facts related to the land sought under the application being considered.

"APPRAISAL OF LAND FOR DISPOSAL"

L. T. Main

Land appraisal can be considered in two phases. First the present or potential use of the land and secondly the valuation or appraised price based on that use.

The determination of the use of the land may be readily apparent. In undeveloped areas potential uses must be considered on the basis of the physical characteristics of the land and its economic environs.

The valuation or appraised price of the land may be established in several ways. The ideal situation is the use of sale prices of similar lands. Deeds of record may not recite the total sale price and thus may require confirmation from some other source. Documentary stamps can serve as a guide to the amount of cash involved but may be misleading if a mortgage is involved. Tax assessments can be a guide in making appraisals if the basis of the assessments are known. Factual information is required for a sound appraisal. Opinions of value must be judged from the standpoint of the interests of the one supplying the opinion.

There are many sources which can be used to substantiate an appraisal. An appraisal in which an easy precise method can be followed is the exception rather than the rule..

"GENERAL LAND CLASSIFICATION AND PLANNING: COMPREHENSIVE AREA SURVEYS AND DETAILED AREA CLASSIFICATION FOR ISOLATED TRACT AREAS"

Edward Cox

Discussion was based on the area classification procedures that have been developed for area surveys in the Missouri River Basin. Copies of "Instructions for River Basin Land Classification and Planning" issued by B.L.M. August, 1950, with appendices, several completed area and sub-area reports with maps, as well as the forms and computation sheets used were circulated among the conferees.

General Land Classification and Planning:

Land Classification is a segregation of lands into categories for a special purpose. Our specific task is to determine the highest or optimum use suitability of public domain lands; a use that will lead to the highest contribution to the national welfare and public interest. Through the land classification work it is anticipated that (1) an inventory will be obtained of the principal public land resources (2) a broad determination will be made of the public lands which should be disposed of and those which should be retained for development and management in accordance with the recognized conservation and land utilization practices that are incorporated in the Departments' river basin programs.

The Act of June 28, 1934 may be considered somewhat temporary in nature in that it may be amended as the need arises or even superceded by more appropriate legislation. Therefore, it behooves the people who are administering the public lands to make the most practical use of the provisions of the law and all other information available to them to make definite plans, both for the immediate future and long range plans, for the proper administration of the resources within their realm of responsibility. These plans are of paramount importance for use as an instrument to help consolidate the thinking and abstract ideas of these area managers, and to get them down on paper in usable and workable form for use by him, his associates and his successors. The data obtained by land classification and survey is a big step in the formulation of these management plans, and a justification of the cost to be incurred in carrying them out with relation to the value of the resources.

To initiate such a classification survey it is necessary that the primary area to be surveyed be determined and delineated. In the Missouri River Basin studies a primary area is defined as the lands within the influence of each authorized Bureau of Reclamation Unit. This is further broken down into sub-areas in which more detailed land classification and planning studies will be conducted. These sub-areas vary greatly in nature, consequently it is necessary that a superficial study be made of each one. These preliminary investigations should consist of assembling and analyzing all available useful information for the area.

The concentration of public domain lands varies greatly on these sub-areas and based on the findings of the preliminary report, definite areas of disposal of isolated tracts and other areas of retention, of public domain lands can tentatively be set up, this tentative program being subject to the findings of the detailed investigations.

Comprehensive Area Surveys:

After assembling all available preliminary data, especially land status with conflicts resolved, the detailed field examination commences. The field work consists primarily of a comprehensive range survey on the retention areas, the type and intensity of survey being adjusted to prevailing conditions and desired results, but includes many refinements and additions such as physical and economic studies, etc., for all of the major resources. With these data proper classification of the lands as to their most suitable uses and a determination of what land-use adjustments and land improvements necessary to a sound land management program are made. Mapping is recorded on acetate overlays placed over aerial photographs and includes the necessary data to be used in compiling the five principal maps which form a part of the completed report. These maps - (1) Base map showing status, reservations, withdrawals, etc.; (2) Vegetative type map showing carrying capacities for livestock, etc.; (3) Erosion condition and proposed improvement map; (4) Land-use capability map, and (5) Land-use suitability and proposed land adjustment map - are all very accurate and detailed with regard to cultural features. Field crews are briefed periodically for standardization and uniformity of results.

The data thus obtained is then assembled, compiled, tabulated and analyzed, then the final report and maps are prepared. It is to be noted that the field crews are to work with the BLM area managers and other personnel who may be directly concerned with the investigations and studies, as well as all other interested agencies and land users, and a close cooperation maintained. In additiom to the maps the final report includes all pertinent data, such as: (1) Physical features including physiography, climate, vegetative cover, soils, water resources and land capabilities; (2) Economic factors including cultural development, major land uses and improvements and land ownership and operating pattern; (3) Maladjustment in land use; (4) Recommended sub-area utilization including proposed major land uses, land improvements, and land ownership and operating data, with available data on estimated expenditure for improvements and probable benefits.

In the comprehensive area surveys, all lands in the sub-area regardless of ownership, are included in the investigation.

Detailed Area Classification for Isolated Tract Area:

Basically, the same procedure is followed for these tentative disposal areas as has been described in the preceding discussion on retention areas, with the major exception that in a disposal or isolated tract area only the public domain lands are embraced by the investigation. Instead of a future public management program plan, the best and most practical approach to disposition of the lands is stressed.

Conclusion:

The surveys provide basic data for program planning and for the land disposal, range improvement, and soil and moisture conservation programs.

"THE SMALL TRACT PROGRAM"

Franklin Bruins

The Small Tract Act of June 1, 1938:

The Small Tract Act of June 1, 1938, as now ammended, provides for the lease and eventual sale of small parcels of the public domain for use as home sites, cabin sites, camp sites, health or convalescent sites, recreational sites, or business sites. These tracts may be of any size, not to exceed five acres. The qualifications of the applicants is the usual one of 21 years of age or head of a family, citizenship or having filed the declaration to become a citizen. A husband and wife, living together, cannot file more than one application unless warrented by special circumstances.

Leases are issued for a period of three years, with an option to purchas the land after the construction of improvements and after at least one year. Leases can be renewed only on the approval of the regional administrator. The rental is fixed as one dollar per acre per year, or a total of $15.00 for the period of the lease on the most common, or five acre tract. Leases of smaller areas are also $15.00 for the lease period. After the land has been leased for one year and after the construction of certain valuable improvements, the land can be purchased at the price for which the land was appraised at the time of classification, plus the costs of any surveys which have been necessary to subdivide the land and minus any advance rental paid.

A leasee may, with the approval of the Regional Administrator, assign his lease to anyone qualified to have received an original lease. Sub-leasing of a tract, in whole or in part, is a violation of the terms of the lease and is grounds for cancelation.

Classification of Public Domain for Small Tract Purposes:

The primary factor to consider in classifying lands for disposal under the Small Tract Act is their nearness to established cities and towns, particularly resort areas. Judging solely on the basis of the public demand for these tracts, items of secondary consideration, but still very important are: (1) The existence or ease of construction of a network of roads; (2) The availability of public utilities, such as electricity and water; (3) The slope of the ground.

The chief features of any area which may result in its rejection for classification under this Act are; (1) The danger of flash floods which may come out of normally dry washes and carry away any improvements and (2) unstable soils which are subject to wind erosion such as sand dunes, where it is nearly impossibl to provide adequate foundations.

Examination for Final Purchase:

After the applicant has leased the land for at least one full year, and has constructed a habitable house with adequate sanitary facilities thereon, he is qualified to purchase the land at the appraised price. At the time of such application to purchase, the improvements are inspected by a field examiner, or area manager of the Bureau of Land Management to determine the true extent of such improvements and to decide if they meet the minimum requirements for purchase.

Factors which are considered at this time are: (1) The permanence of the improvements. It is not at all rare for an applicant to merely move a house trailer to the tract and claim this as his improvements. Since this could be readily removed and the land used for speculative purposes, trailers, unless on very good perment foundations, are not accepted. (2) The total value of the improvements. This is often rather hard to arrive at, since in many cases the applicants have built their own houses, often using native materials such as adobe brick or rock, in which case the cash outlay for materials may be very low, but the labor invested extreme. (3) The sanitary facilities. (4) The existence of electricity and water, although a large number of such places haul their water from town. (5) The liveability of improvements. (6) Their harmony with their surrounding and with the existing improvements. In regard to this matter, the writer has seen one area where a group of small tract purchasers formed their own water company and require that any house constructed in the area pass an inspection of its neighbors before water will be connected.

Summation:

The areas available for small tract purposes in Southern California (where the speaker has had most of his experience with this type of disposal) are dry, desert lands, where the Gila Monsters carry canteens. It is not known what the attraction of these lands is, but there is no accounting for the madness of Southern Californians, and the program, under the name of "Jackrabbit Homesteads" is quite possibly the most widely published and the most favorably considered of all the Bureau's work in this area.

"THE MINING PROGRAM"

Donald Reed

Present governmental policy is to encourage and expand the discovery, development and production of essential minerals by private industry by: (1) Direct loans under the Defense Production Act to private producers for the purpose of expanding their present capacity, developing new capacity, exploration and mining, or developing new techniques or processes; (2) By stabilizing and guaranteeing markets for their products through long-term contracts; (3) Through allocation of priorities in obtaining machinery, equipment and necessary supplies; (4) Through a continuance of the government program of investigation and research.

The Bureau of Land Management has up to this time operated on a case basis. It is probable that we will continue to so operate with the present personnel. Our work load is such that there seems little chance of catching up to it, much less expanding its scope.

However, at the 1950 conference on Land Planning and Classification held in Washington, D. C. in November 1950, it was concluded that the Bureau's responsibility was broader than such a basis and that a mining program was needed. Conclusions reached were that:

(1) Mineral classifications and examinations are functions of the Division of Land Planning. This point would seem so obvious as to require no comment.

(2) Regions should develop mineral programs and plans as a part of their overall program. The plan should provide for orderly exploration and use of mineral resources. As a part of planning, policies should be developed on such items as the leasing of oil or other materials, but it would seem that actual exploration and development of mineral resources are the functions of the Geological Survey and the Bureau of Mines. At any rate, as presently set up, B.L.M. has no organization capable of such studies.

(3) Mineral classification should be carried out in connection with other area classification work, particularly in areas suspected of being mineral in character. Priority should be given to those areas where there is a conflict between surface and sub-surface area.

(4) The Bureau should proceed with an accelerated program of invalidating improper mining claims within the framework of the existing mining laws, as fast as funds are made available for that purpose. This would seem on the face of it to be a desirable thing to do, but closer scrutiny will show it to be impracticable for several reasons. First, funds are not available. Second, we have no means of knowing of the existence or location of unpatented mining claims. Third, it would be useless to invalidate a claim unless some other disposal were made of the land immediately. The locator or any other person could under the present law relocate the claim and the same process would have to be repeated.

(5) Existing mining laws should be revised to conform to present-day conditions. Our basic mining law was the Act of 1872. It provided that mining locations might be made in 18 of the western states and Alaska, and that locations might be for lode claims, placer claims, millsites, or tunnel sites. No limit is placed on the number of claims which may be staked or located by any individual or group.

It should be realized what a powerful effect a mining location may have. In any other type of application for public domain land, it is necessary for the applicant to file his application in the Land Office and to wait for an examination and approval before moving on to the land. On a mining location, it is necessary only for the locator to declare that he has made a mineral discovery, mark the boundaries of the claim by posts or monuments, and to file a copy of his location notice in the office of the County Recorder. He may then immediately move on to the claim, excavate shafts, cuts or tunnels thereon, erect houses, buildings, cut timber and in general do just about anything he pleases. Unless contested, th claim may be held indefinitely by doing $100 worth of assessment or improvement

work on it each year. Claims may be staked on any of the public domain not specifically withdrawn from such entry.

Recommended revisions of the mining laws may be summarized as follows:

(1) Recordation of all claims in the U. S. Land Offices should be required, with their location with reference to public land subdivisions given accurately enough to show them on a township plat. Even better would be to make lode claims, as with placer claims, conform to regular land surveys and to eliminate extralateral rights. If this were done and the claimant further required to file an affidavit of assessment work performed each year, we would know at any time whether or not such claims were in existence and in force on any of our public domain land. As it is, we do not know this. Also, the claimants' interest would be protected in the event of any other type of application or claim being made on the same land.

(2) Recognition of geophysical exploration as a means of establishing proof of discovery and to provide opportunity to do such work. The 1872 law requires that for a lode claim to be valid, valuable mineral in place in a lode or vein must be found thereon. At the present time it is probable that nearly every foot of the surface of our country has been examined for the presence of mineral. Any exposed vein or lode carrying valuable minerals has been claimed and perhaps worked. Future exploration and development of new ore deposits will depend on the discovery of deposits which do not appear at the surface of the ground and of the exploitation of large bodies of very low grade ores which new technologies in mining or metallurgy have rendered susceptible of being handled at a profit. New techniques of prospecting for these subsurface deposits have been developed. Such work is ordinarily quite expensive. Some means should be provided in the law to allow qualified applicants to do such work in any given area and to protect them with a valid location on any ore-bodies disclosed through their efforts.

(3) Removal of incentive to file mining claims for the purpose of acquiring land for purposes other than mining. Because of the fact, as hereinbefore mentioned, that a mining claimant may merely be the act of filing a notice in the County Recorders Office, move onto a part of the public domain, and in places where no other type of application would be even considered, many claims, lode or placer, are filed on lands by people who have no interest in or intention of doing any mining, but who wish to thus acquire the land for other purposes such as homesites, business sites, etc. If the law were so amended as to prohibit the use of the surface of the mining claim for any purpose other than legitimate purposes accessory to mining, this headache would disappear.

(4) Limit time a mining claim can be held before applying for patent. At present a mining claim may be held indefinitely without coming to patent. Unpatented claims are not taxable. If a time limit were placed on a location, the claimant would have to patent or to relinquish it to some other party who might develop it.

"MINERAL EXAMINATIONS"

Otto Metzger

All mine examination work is for the purpose of evaluating mineral deposits, and the mining engineer employed by a mining company deals with this phas of the subject almost exclusively. But the Bureau of Land Management Engineer must deal with this phase of the problem and in addition he must analyse and interpret his findings with relation to the basic mining laws. His work, more than that of any other mining engineer, is likely to become an instrument in court proceedings. Since courts place great emphasis on original field notes, the importance of carefully taken field notes cannot be overstressed.

Mine examinations that Bureau of Land Management Engineer is called upon to make fall into four general catagories. They are (1) examinations for determining ore reserves, (2) examinations for determining the validity or invalidity of mining locations in connection with patent applications, (3) examinations for the purpose of eliminating invalid locations from lands that are needed by the Government for other purposes, (4) examinations of lands embraced in applications for agricultural, grazing, on which valuable minerals are suspected or known.

Examinations of the first category are the ones with which most mining engineers are generally concerned. They are also of great importance to the mine valuation engineer of the Bureau of Land Management, although he may be only occasionally called upon to make one. They are frequently necessary for determining the value of mining properties in areas that are withdrawn for reservoirs or bombing ranges, or for any other purpose that would result in damages to mining properties of merit. The work involves careful surface and underground surveying, careful and exhaustive sampling, and a study of local geology. In examing placer deposits, costly drilling and test pitting are necessary.

Examinations of the second category are the ones that the Bureau of Land Management engineer will be most frequently called upon to make. Their purpose is to determine if a patent application is to be denied or allowed. A mining claim will not qualify for patent unless it has the following; (1) a discovery of valuable mineral or its equivalent, (2) improvement work worth at least $500.00, and (3) a mineral or minerals that have a market value. It is these three features that a Bureau of Land Management engineer must check in making an examination of this category.

The legal concept of a discovery may prove to be a source of great difficulty in determining the validity of a mining location. There is no statutory definition of a discovery, but in broad general terms, it is regarded as any showing, not necessarily of a valuable mineral, that would justify a man of ordinary prudence, to a further expenditure of his time and money in developing the claim.

Showing of valuable minerals in almost any appreciable quantity are generally regarded as a discovery. An examination of such showings is quite simple, and generally consists of cutting a few samples as evidence. Valuable minerals consisting of ores of copper, lead and zinc, and other non-precious

metals can generally be recognized by a close visual inspection. It is always advisable however to corroborate such visual inspections by sampling. Carefully cut samples assayed by a reputable assayer come about as near to being documentary evidence of the presence or absence of valuable minerals as anything that an examining engineer can produce.

Discoveries based upon what amounts to geological inference may prove very troublesome and difficult. In such cases, the valuation engineer has no other alternative than to make a careful geological study of the land being examined, and corrolate this with the geology of ore deposits of proven merit in the near vicinity. Ordinarily, a patent will not be allowed on the basis of geological evidence alone. Exposures of such geological conditions are generally regarded as sufficient to justify a man of ordinary prudence in the further expenditure of his time and money, and are therefore considered valid discoveries and there are numerous decisions of the courts upholding this concept of a discovery.

Inspection and examination of improvement work is necessary to determine if it is sufficient to satisfy the requirements of the law, and also if it is actually for the benefit of the claim embraced in the patent application. The latter is not difficult to determine when the improvement work is on the claim in question, but the courts have held that improvement work for one claim may be done on some other claim provided that the work is of such nature that it benefits the claim under consideration. The department has been very liberal in allowing improvement work of this kind. As a result of this, it is becoming increasingly difficult for an examining engineer to prove the invalidity of improvement work claimed by a patent applicant, even though the work may be very remote and have little or no relation to the claim embraced in the patent application.

In addition to examining a claim for valid discovery and sufficiency of improvement work, the examining engineer must determine if the mineral for which the claim was located has a market value. By a recent decision the department has held that a claim is not valid unless it contains minerals that have a market value. Examinations of such claims require a determination of the amount and quality of the material in question, and a study of local transportation facilities and economic conditions to determine if the material has a market value and if it can be produced in competition with similar materials from other sources. Other deposits that fall in this category are those that contain appreciable amounts of valuable metals in the form of complex ores that cannot be economically treated by any known metallurgical process. Nickle is the metal most generally found in ores of this type.

Examinations of the third category, that is examinations for the purpose of eliminating invalid locations, are made in much the same manner as examinations for patent applications, with the exception that improvement work is not taken into consideration. The reason for this is that the Government cannot prefer charges against an unpatented claim for lack of improvement work or for non-performance of assessment work.

Claims located on deposits of gravel and other non-metallics where the presence of the mineral involved is obvious, cannot be declared invalid because of no discovery. Many of these claims are valid and therefore cannot be eliminated.

Others however are invalid because the minerals involved have no market value, or because the locator failed to comply with legal requirements in setting corner posts and location monuments, or in properly filing a location certificate.

The work of an examining engineer is by no means completed when he finishes his field work. The preparation of a report may require only a few hours or it may require days. Reports based on field work only require little more than a compilation of factual data collected in the field with a clear and concise declaration of conclusions and recommendations. Frequently, however, a patent applicant will submit numerous exhibits and reports in support of his patent application. Such action on the part of the patent applicant is an indication that the validity of the claim or claims is questionable, otherwise it would be unnecessary to submit any supporting evidence. Although such exhibits and reports are more often than not, false, misleading, and in some cases obviously fraudulent, they cannot be ignored. They must be analyzed and broken down so that their misleading and fraudulent nature can be exposed in the report.

"PROGRAM PLANNING"

J. R. Penny

The planning and policy-making process in the Bureau of Land Management circulates both up and down throughout the lines of command. However, there are certain so-called "strategic points" in planning recognized by everyone - places where policy decisions are made, where added meaning is given to Government action. A review of this common everyday process and these "strategic points" of planning and policy-making may help us to appreciate more clearly some of the rather unique principles underlying the administration of the Bureau of Land Management.

Initially the planning and policy-making processes originate with the voter, the number one "strategic point." A certain need, a dissatisfaction, has arisen in the minds of the people and is expressed by them through voting at the polls, in newspapers, on radio and television, and by conversation. A law is passed to remedy this need and alleviate the dissatisfaction through action of the Chief Executive and Congress, the second "strategic point." In passing the Act, they have set up the broad policies to be followed in remedying that need, and in providing bedgetary funds they have set up the general plan of action.

When the Department of Interior, the third "strategic point," was charged with the administration of such laws, the Soil Conservation Act of 1935, the Taylor Grazing Act, etc., it had to interpret their meaning, plan the overall organization to carry out their various provisions, and in a general way originate policies, procedures, rules and regulations needed to execute them. Perhaps the Department's chief function is one of inter-agency correlation.

As the fourth "strategic point," the Bureau of Land Management was delegated by the Department the responsibility of administering certain of the laws.

Its activities at the national level were in general a limited more detailed refinement of those of the Department, with its principal planning function being that of budgetary justification.

At the regional level, the fifth "strategic point," the planning process has primarily taken on the aspect of outlining supervision of field work. Most of policy forming decisions, procedures, rules and regulations evolved at this level pertaining to that phase of administration.

The sixth "strategic point," the district office, whether it be land and survey office, forestry office, or the grazing office, from the organizational point of view is the "strategic point." Here is where the policies handed all the way down are executed. Here is prepared the work plan, the means of achieving the purposes of the Act, the justification of our existence and continuance as an organization.

Not, however, that the "strategic points" in planning stop here. We have merely completed the circle. We are back again to the "strategic point," the private citizen who is now measuring what is being accomplished to alleviate that need and dissatisfaction for which he originally had the Act passed.

I ask you, should there be any question why we have a working system of advisory boards? Why we have as a basic policy the cooperative functioning with our clientele so that we may secure the benefit of their knowledge in preparing our work plans and assisting in executing our programs of activities?

Decisions of planning, whether they be good or bad, are made at these strategic points, and better that they are than if we just drifted. It is well also that these strategic points are not all in distant places. The ones that are important to the individuals affected are in our everyday activities. When a notice of trespass is served or you get a traffic ticket, these are important "strategic points" when decisions of policy are made. The same is true of the adjudicator adjudicating an oil or gas lease, or the voucher clerk auditing a voucher. Wouldn't it be an impossible situation if such decisions had to be made by some distant higher echelon - if there were not provision for dual supervision by delegation. Recognizing this need was responsible for the Director's and his Staff forward thinking in carrying out the Bureau's plan of decentralization.

What planning actually is, generally, is not understood. One of the simplest and best explanations I have heard is that it is merely an "effort to improve making of decisions." As has also been stated elsewhere, our problems are so vast and difficult we cannot afford to dissipate energy and good will in conflicts due to ignorance and misunderstanding concerning the nature of our tools.

Operational planning, or what we term as program planning, is thought of as the process of current planning and current review of plans. Some think of this as a function of a separate planning agency. The danger in this is that to many it is implied that administrators are not or should not be concerned with policy. But policy and planning cannot be separated even if policy consideration is considered a function of a separate planning agency. The administrator simply cannot do away with operational planning. He must anticipate future problems and devise means of coping with them, not only for his use but to acquaint those

associated with him and those who might follow in his capacity with those problems and proposed solutions.

In the BLM we are not bothered with this danger. Operational, or program, planning is carried on by all Divisions, with the Division of Land Planning serving only to coordinate and provide leadership. The placing of this activity with the Division of Land Planning was largely a matter of chance due to availability of funds. Actually in Region I, I understand, the responsibility for coordination and leadership in program planning is delegated to the Division of Forestry, and in Region II to the Division of Range Management.

The forming of a program plan, as with all forms of planning, begins with a sense of need and actually is "the constant task of refining and sharpening objectives to be accomplished through administrative action" to maximize efficiency and effectiveness. Its value is measured by the use to which it is put.

Elements to be considered in the preparation of plans for administrative action are:

1. Identification of the problem
2. Fixing the objective
   (remember the core of the plan is a refining and sharpening of the objective)
3. Measuring the situation
   (collection of data)
4. Design of plan
   (program of action)

To these four elements some attach a fifth - translating plans into programs.

Program planning always creates at the start the problem of how far to go in planning, which depends on the individual situation. The forest, with a cutting cycle of a hundred years, obviously requires long-range planning. Yet short range planning must also be provided in the preparation of a program of relatively current activity. Long-range planning is usually done to isolate long-range problems from current problems.

An excellent example of the need for operational planning has already been mentioned in connection with range management but which I would like to repeat. We are confronted with the unfortunate situation of having most of the range managers carrying a vast amount of vital planning information in their heads with very little of it being put in record form. This information is, of course, lost whenever the individual leaves the job.

We can think with justifiable pride of our past accomplishments, yet we are unable to speak of them with any degree of factual support - facts which would aid materially in supporting our budget justification and in showing the voter his dissatisfaction and recognition of a need was not only justified but that the need is being well met. If it had been possible to carry out the recognized planning activities and associated action program, this situation would not be existant today.

EVENING SESSION ON LEGISLATION

H. Lieberman

The preliminary talk covered four main topics:

(1) The legislative process.
(2) The organization of the legislative unit.
(3) The drafting and interpretation of legislation.
(4) The legislative program.

The legislative process was outlined to indicate how a proposal was reviewed in the Bureau by Washington divisions and the regions, then by the Department, and finally by the Bureau of the Budget. Then the proposal was followed in Congress to show its introduction, its consideration at subcommittee hearings, committee reports, the placing of the bill on a calendar, and the voting on the bill, conference reports, and final consideration by the President of the enrolled bill.

In a discussion of the Consent Calendar, the Director pointed out that we were more successful on the bills of lesser significance, that our bills generally were placed on the consent calendar. He said this was done to avoid the difficulties of getting a rule from the Rules Committee, to obtain Congressional consideration, a difficulty more formidable than that of getting our bills passed without a single objection.

The legislative unit was discussed to indicate the procedure for sending bills for comment to the field. It was pointed out that comments were necessary only when it was so indicated. The need for meeting deadlines and the reason for such deadlines was indicated. It was also pointed out that legislative policy is set by the Department and that the Bureau prepares all reports for the signature of the Secretary. The Director may, however, sign memoranda drafting legislative proposals as a service for Congressmen with a warning note accompanying the draft indicating that it is submitted without committing the Department as to its views.

Some comment was also made on the problems of drafting and interpreting legislation with emphasis on the difficulty of getting simple legislation because of the number of reviews and compromises necessary.

The legislative program was outlined and discussed. The major fields noted were special area legislation like bills relating to Alaska and the O and C., bills relating to land management and disposition like the proposed amendment of the Recreation Act, bills relating to management of mineral resources, and general administrative or housekeeping bills like the bill to facilitate administration of the public lands and the temporary employees land interest bill.

FORESTRY

September 18 and 19, 1951
Discussion Leader: G. H. Sharrer
Forestry Field Trip September 18, 1951

The delegates travelled to an area of public domain timber land northeast of Squaw Butte. During the first hour Gwynne Sharrer, Region II, discussed some of the basic principles involved in growing, protecting and harvesting saw timber. The talk was illustrated with actual examples on the ground since the lecture area was within a stand of virgin pine timber.

The second hour was devoted to a discussion of equipment used by foresters with a full scale demonstration by Larry Casey, Region V, and short talks by each of the foresters present concerning the use of various pieces of equipment.

During the third hour of the morning four talks concerning the various phases of forest mensuration were given, primarily in preparation for the practical exercises in the afternoon.

The delegates divided into three groups in the afternoon and had actual practice in scaling, cruising and marking saw timber, under the direction of all the foresters present.

The Need for Proper Forest Inventory
Charles M. Genaux

The need for a proper forest inventory was discussed, and the following outline was developed:

1. Basic information needed for a forest inventory

   A. Information about the timber

      1. Where the timber is
      2. What kind of timber
      3. How much

         a. Species
         b. Age classes
         c. Condition and quality
         d. Rate of growth

      4. Accessibility

   B. Significance of timber to the public

      1. Who needs it
      2. When will it be needed
      3. What difference does it make

         a. Watershed values (including water yield, flood and silt control)
         b. Recreation
         c. Economic significance
         d. Community significance
         e. Social significance
         f. General relationship to other programs of the Bureau of Land Management

The appraisal of Market Values of Merchantable Timber in Region V as Compared to that in Region I

Larry Casey

The true value of any stand of merchantable timber is determined by the value of the products which may bemanufactured from that timber, less the total cost of producing those products, including in those costs a fair margin for profit and risk.

In Region I has been developed an excellent economic appraisal system based on three major premises, namely, that there must be:

1. An accurate estimate of the quantity and the quality of the merchantable timber involved.

2. An accurate determination of the actual average current operating costs incurred in logging, transporting and milling merchantable timber by logging and milling operators of average efficiency.

3. A fair and equitable division of the arithmetic difference between product sale value and production costs into (1) operator's margin and (2) stumpage price.

Other regions have been inclined to follow the example of Region I with minor variations to fit their particular needs. In Region V, for instance, where fewer sales are made, where competition is less keen, and where the quality and quantity of the timber cannot match that in Region I, timber appraisals are drawn up using more localized cost data. In figuring the cost of log hauling, timber buyers in Region V will frequently set up their mill on or close to the timbered land, hence, a low cost for hauling logs from stump to mill. Operators on O. and C. lands on the other hand, generally haul their logs a greater distance to a permanent mill at some nearby city or town. Whereas the problem of timber access roads and who may use them is often a thorny one in Region I, it seldom enters into the picture when selling and appraising timber in the southwest region. Whereas it is customary in many areas for timber appraisers to use the selling price of surfaced, finished lumber in computing the conversion or pond value, this would be likely to result in an unreasonably high stumpage price in Region V; accordingly, the lower selling value of rough, green lumber is used there in computing stumpage values.

Woodland Management

Larry Casey

Vast areas of the West are covered with a woodland type consisting of pinons and junipers varying from pure pinyon stands to pure stands of juniper. Three species of juniper--Juniperus utahensis, J. scopulorum, and J. deppeana, and two species of pinon, Pinus edulis and P. monophylla, predominate in the woodland type. Regions II, IV and V all have their share.

Large areas of woodland have been abused and intensive management is required to restore them to their maximum productivity and use. It has been estimated that on the poorer sites and overcut areas there are 1-3 posts per acre whereas on the uncut areas there are 25-30 posts per acre. Although the above are low-value

species they do have a number of uses and play an important part in the economy of many Spanish and Indian communities in the Southwest.

The pinon pine provides firewood, the edible pinon nut, and Christmas trees. Juniper products consist of fuelwood, fence posts, and Christmas trees. The juniper tree produces fenceposts that are unexcelled. Limited quantities of lumber can be sawed from the larger trees. A sustained yield form of management can be applied where the juniper occurs in pure stands.

It is suggested that juniper stands should be managed on a single-post tree basis under which the cutting would be 30 or more years apart. In the past there has been practically no management of the woodland resource. Permits have been issued indiscriminately and cutting has taken place according to the desire of the operators. However, this condition is being overcome to some degree through issuance of permits and sale contracts by range managers and some field supervision of cutting operations. Broad management plans have been made for each grazing district. These plans consist chiefly of a map showing the area of each district covered with the pinon-juniper type. This woodland map is prepared from data available to the regional office and the districts including range survey data, aerial photographs, general knowledge of the area, etc. Each woodland area in the district is then classified as being an area available for sales, reserved for BIM use, free use, or an area of non-use.

Juniper-pinon cover cannot compare with a herbaceous cover, particularly perennial grasses, in controlling soil erosion. Where the control of siltation constitutes an important problem, it would appear that proper management of the herbaceous resources in the woodland type is of greater importance than management of the juniper-pinon cover itself. There is a growing pinon-juniper invasion of rangelands in the Southwest. Removal of such stands is economically unfeasible at present, but it is hoped that as a result of further research, cheap and effective methods of control may be developed.

Briefly, our broad program of forest and woodland management is as follows:

a. Determine, with a reasonable degree of accuracy, the location, acreage, character and volume of the forest and woodland resources.

b. Prepare a plan of management for these resources in accordance with Bureau and Regional Policies, the principle of sustained-yield, and correlate it with other surface uses and programs.

c. From information obtained from survey data, prepare an annual sale program which is in line with personnel available to properly supervise the activity.

d. Take vigorous action on all timber trespass cases.

e. Participate in area land disposal and acquisition to insure forest and woodlands being consolidated into desirable administrative units.

f. Cooperate with the States and other Federal agencies in order that maximum benefits and sustained production of the sawtimber and woodland resources may be assumed.

g. Make intensive studies of the woodland resource to determine species, site quality and growth characteristics.

h. Keep informed on techniques and practices pertaining to all phases of inventory, management and harvesting.

ACCESS ROADS

Frank Ter Bush

The Oregon and California division of the Bureau of Land Management has three methods of acquiring access to the timberland it manages for the people of the United States. One method is for Congress to appropriate funds to the BLM which it in turn allots to the Bureau of Public Roads for access road construction. Another method is to have the operator build a road as part of a timber sale agreement. The third method of gaining access to an area is under the terms of the Right-of-Way regulations which the Bureau has set up. We will discuss each in its turn.

Broadly speaking, an "access road" is any road which taps a supply of timber. A more catholic definition of this term would be, "Any road constructed for the BLM by the Bureau of Public roads out of appropriated funds for the purpose of developing the timber resource." The need for access roads has long been recognized. It was given further impetus by the state of national emergency under which we now live.

These access roads are finished high standard roads. They are engineered with a view to good alignment, moderate grades and adequate drainage. These are permanent roads. The Quartsville-Crabtree road is such a road.

Industry at first was opposed to the construction of Federal access roads. Their attitude has since softened considerably. This was particularly apparent this year when industries spokesmen lobbied against the Congressional desire to cut access road funds from the Bureau's budget request. Congress relented and finally appropriated $700,000 to the BIM for access roads in 1952.

In many of our sales, provision is made for the timber to pay for the road. Due allowance is made in the contract for the construction of the necessary road. Many considerations determine the size of this allowance, among these are:

1. The number of miles of road being amortized.

2. The cost of the road. The cost for various types of construction, , type of surfacing and bridge costs should be itemized.

3. The volume of public and private timber tapped by the road. The data from which this information is derived should be indicated and a map of the ownership in the drainage prepared.

4. The volume of public and private timber already removed.

5. a. The government's share of the cost of the road.

   b. The amount previously written off in mainline construction costs, or spur road construction allowances where the road has been improved and became part of the mainline, and amortization allowances.

5 cont'd

c. The amount remaining to be written off.

This method is eminently fair and practical where the opening of a previously undeveloped area is the main consideration. However, it does not cover all cases.

Due primarily to the intermingled nature of the O. and C. ownership the third method was devised, namely; the Right-of-way regulations. These were developed in 1949 and adopted the following year. A substantial number of road agreements under these regulations have now been completed.

The primary purpose of these regulations is to make timber equally available to all prospective purchasers. This is done through the device of securing reciprocal road use agreements with the owners of roads or property over which O. and C. timber must pass on its way to market.

Before any tract is offered for public sale it is the duty of the District Forester to obtain right-of-way agreements that will insure access to that tract. These agreements are primarily an exchange of rights. The owner exchanges his right to sole use of the road for equitable compensation based on the volume of timber that will in the future, and has in the past, come out over his road as well as on the road's cost or replacement value. The agreement insures the purchaser that he will continue to have full use of the road. In many cases this agreement contains a provision that the owner will receive a fixed fee which may reach $3 per M for all timber coming over his land or road. The size of the fee is dependent upon previously mentioned factors.

The Right-of-Way regulations also contain provision for the building of roads through cooperation with private operators whose timberland is intermingled with O. and C's. In this case the operator and the Bureau first agree on the following:

a. Location
b. Type of road
c. Amortization rates
d. The distribution of costs
e. The method of financing

After this is done the operator builds the road and its cost is prorated over all of the timber that will come out over this road. The Tyee and Upper Smith River roads were built under this arrangement.

Hence we have seen that the Bureau has three methods for getting into the timber, namely:

1. Bureau of Public Roads' access roads;
2. The building of roads through timber sale;
3. Obtaining of access through the Right-ofWay Regulations.

In this time of national emergency, the Bureau is pledged to the development of the timber resource for national defense. It will continue to use every means at its command to develop this resource in line with its stated policy of sustained-yield. The over-all road program is a key factor in such development.

O. and C. Sales Program

Ralph Healy

An outline of the O. and C. timber sale program was presented as follows:

A. Objectives of the program

1. Based on sustained yield to stabilize industry and better the communities.

B. How cutting is distributed in a district

1. The district
   a. No timber to leave the district for primary manufacture.
2. The Master Unit
   a. Timber cut in the Master Unit is restricted to primary manufacture in that Master Unit.
   b. A marketing unit is set up that can take timber in from all the master units for manufacture.
3. The Administrative Unit
   a. The master units are broken into smaller portions by drainages to make up the administrative units.
   b. Each administrative unit has an allowable cut which is:
      (1) Basis for distribution of the allowable cut.

Procedure for setting up the Program

A. District forester estimates volume that he can sell and stay within the allowable cut or that his personnel can handle.

B. Report is made to Advisory Board and Regional Office with explanations as to differences in calculated annual cut for the administrative units and his estimated sale volume. This is before May 15.

C. Changes may be made by regional office. When things are set up suitably the Regional Office will advertise the plan and send out notices to those on the mailing lists. Invitations for suggestions are sent out.

D. Suggestions must be in by August 1.

E. Suggestions are screened in the office and in the field.

1. Rejections are on basis of seed source, maturity of timber, recreational value, fish and wildlife, etc.

F. Distribution of volume to Administrative Units

G. Modified sales plan by October 15 to Regional Office and to Advisory Board.

1. Regional Office may change it so they review the program before the Advisory Board does.

G cont'd

2. District forester may make changes that Board recommends.

H. Completed plan is sent to Regional Office by November 15.

I. Regional office advertises the plan for all five districts and sends the program to all those on the mailing list by December 1.

J. Cruising and other field work for setting up the quarterly sales.

K. Changes can be made by District Forester after consulting with Advisory Board and Regional Office.

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Under a new regulation the District Forester can sell 100 M feet to individuals without advertising. This is for small isolated tracts and salvage. Only one per person except for salvage. It should be put up for public auction if it is apparent that competition exists.

FIRE CONTROL

Virgil T. Heath

Fire control is the responsibility of the entire personnel of a region rather than of the few who are paid from fire funds. The Bureau of Land Management has a large fire problem. There are 138,120,755 acres of public domain land in the United States, requiring protection, with an added 225,000,000 acres in Alaska.

The large area of public domain which has burned over since the advent of the white man acts as a forceful demonstration to call attention to the fact that there is an immediate need for more efficient fire control. Before efficient fire control can be had, we must know:

(1) The size of our fire problems
(2) Number of fires to be handled
(3) History of past fires
(4) Protection standards needed

It was brought out that a few of the more important requirements for successful fire control are:

(1) A thorough understanding of factors influencing a fire and their subsequent behavior.
(2) A thorough knowledge of the abilities of the men and their efficiency in the use of the tools with which they work.
(3) A rating of the relatives values of the areas to be protected and a measurement of the damage that fires may do to these values.
(4) A detection system built to handle the problem within the area to be protected.
(5) The backing of the public. Every fire must receive some degree of action; therefore, you must know--how, when, where, why and who.

It was further pointed out that the fire control organization would never attain the degree of success desired until we know fire behavior thoroughly and act accordingly. Protection standards became a necessity in an efficient fire organization. Our one objective should be to hold the greatest number of fires to the smallest possible size class.

In the discussion of fire prevention, public education, publicity, public contacts, reduction of fire risks and law enforcement were discussed. A special emphasis was placed on fire control education in the schools. Fire presuppression was discussed at length with the emphasis being placed on personnel training, detection, purchase and distribution of equipment, service and supply and cooperative agreements. Time was also spent on the discussion of the effects of fire on wildlife, watershed, recreation, cultural investments, air transportation and the social economy of the areas affected by fire. Fire suppression was discussed from discovery through mop up. Safety was emphasized as the concluding subject.

"BLM --- PAST, PRESENT AND FUTURE"

MARION CLAWSON

September 20, 1951

BLM tries to keep its personnel informed of the Bureau's programs--what we want to do, why we want to do it, and how we propose to do it, and after working on a program, the results are publicized and any mistakes or other weak points are criticized with the intent to strengthen the whole program. A widespread knowledge of BLM and its objectives helps everyone to work better. BLM belongs to all of its employees--the Director, his staff, and all the field personnel, both regional and district. The Washington office is dependent upon all of BLM in many things, and there exists a mutual dependency between Washington and the field.

Long-Run BLM Problems and Program

1. Historical look at the land problems of the United States.

The settlement of the United States was a unique episode in world history. This vast continent, situated in a temperate climatic belt, was loaded with resources. Because of the tremendous increase in technological knowledge, the resources of this nation permitted it to become the leading nation in the world in less than 300 years after initial settlement from Europe. Land was the key to the success of this growth.

The General Land Office was a major factor in United States land history. As an organization, it had a lot of shortcomings, but nevertheless, it was the active agency in establishing land title for all land alienated from the public domain. The records of the GLO, dating back to 1812, are still being used to set up title verification.

2. History of the last 50 years.

Establishment of national forests was permitted by the act of March 3, 1891. They since have been transferred out of Interior (1905). The Reclamation Act of 1902 permitted the development of arid public lands by irrigation made possible by Federal funds.

There was a great homesteading boom in the 1920's. The expansion of settlement embraced grazing lands in semi-arid Great Plains. Development of the homesteads required plowing up a great deal of grasslands which should have been left in their native condition for grazing only.

Between 1910 and 1920, there was much active discussion in the field of mineral conservation, especially as relating to nonmetalliferous minerals. Culmination of the discussions came with the approval of the Mineral Leasing Act of February 25, 1920, which permits leasing of Federal land and extraction of the nonmetalliferous minerals therein on a lease-royalty plan.

Great opposition was generated by the public against the inauguration of a Federal land-purchase program, to facilitate conservation, but it was finally adopted. The Weeks Act of 1911 permitted land to be acquired by purchase for national forests. The purchase of submarginal land, as a conservation measure, came through early New Deal legislation. Other legislation has permitted acquisition of land to accommodate military needs, for storage depots, testing grounds, etc.

The Taylor Grazing Act of June 28, 1934, is one of the great conservation acts. This Act provides the real charter for a program of sound management of the public domain, rather than to permit continued wholesale disposal thereof.

The CCC program of early New Deal days did a great deal to facilitate conservation activities throughout the nation. Among other benefits to the BLM was the Squaw Butte station, constructed by CCC help.

The General Land Office and the Grazing Service were each exercising similar supervision over some of the same public-domain lands. There were about 142 million acres in grazing districts. The Grazing Service issued grazing permits, constructed range improvements, and made range surveys, while the General Land Office accepted applications for homestead entry, desert-land entry, exchange, and public sale, as well as for oil and gas and other mineral leases.

O and C lands in Oregon were administered by the General Land Office after 1916.

All of these duplications and improper jurisdictional setups made an incongruous and inefficient situation regarding administration of the public domain.

3. History of the past 5 years.

On July 16, 1946, the Bureau of Land Management came into being by a consolidation of the General Land Office and the Grazing Service under the President's Reorganization Plan No. 3 of 1946.

The opposition to decentralization was strong, as evidenced by the Congressional action on the appropriations bill for 1949, which forbade moving any actions from Washington to the field, unless previously the action was permitted to the field. However, in the following year this prohibition was not repeated.

The effect of decentralization is most noticeable in the district land offices, where action on disposal cases is now being taken. Under our program of simplifying work through management improvement programs, the production in land-office adjudication actions is up 500 per cent per employee from 1948.

The appropriations given for the past four years have been good, even though short of what we have asked. The 1952 appropriation will be double that given us in 1948. The dollar increase is not a true picture because higher costs have reduced the actual gain and we are not able to have double the 1948 personnel total in 1952.

As with any large organization, some errors inevitably creep into the work. Some complaints have been received because of these honest errors. BIM always does everything possible to correct any situation which has arisen because of error on its part.

Since 1948, BIM has become an entirely different organization internally. Whereas before, no one knew what anyone else was doing, and cared less; now, the operating personnel, which includes everyone, knows what is being done and why, and each person knows the why and wherefore of his own job.

4. Current problems before BIM.

One of the foremost problems before the Bureau is to achieve greater efficiency of operations.

We must carry on a continual war against the preparation of unnecessary reports, but we must realize that the Washington office needs information, and therefore, requires a lot of reports which may seem inane to the field.

BIM needs uniformity in procedures and operations relating to routine matters, but not to the extent that it has a bottle-neck.

We need a much larger appropriation. This need will be a perpetual problem. To cover our normal growth and to keep pace with the national growth and demand for public-land use, our appropriation should be doubled in 5 years. There are many obstacles in the way of increased appropriations. The people generally don't know about public lands and their extent and importance to the national economy. We must educate the public about the extent of the public domain, the value of resources thereon and therein, and the myriad uses which public lands and resources can sustain.

We must do a lot of work to revise the legal structure which both enables us to work and hampers our operations by its multiplicity of detail. Perhaps more than 5,000 land laws have been enacted by the Congress and approved by the President, but of this total, somewhat more than 4,000 acts have been to benefit private citizens. There are several score of land laws of general applicability on the same subject. The original acts were very specific and went into too much detail, with the result that changing conditions required new legislation. Instead of amending the existing law, the practice has been to create a wholly new act to cover the new situation.

We need better internal operations. The personnel generally know much of the objectives of the Bureau, and all of them should know certain fundamentals, but unfortunately many don't. A program of education is indicated.

We are trying to present maximum opportunities for every member to reach the limit of responsibility for which he is capable. Much personal satisfaction comes with the knowledge that his maximum personal potential is being utilized in the job. Squaw Butte conferences present an opportunity for all participants to learn more of the program so that each can do a better job and perhaps attain a better position later. Promotion comes only to those who can do the work or a bigger job a little better than anyone else.

Opportunities at different assignments will be given to deserving persons so that they may broaden their scope of operations and experience. The Bureau will help any deserving person who desires to take further schooling. The regions can create opportunities for more experience by means of geographical shifts in district personnel, and perhaps even inter-regional transfers.

The BLM policy is for every individual to have an opportunity to grow.

We need to have better public understanding of BLM and its part in the management of the public lands. To this end, we have initiated our magazine, Our Public Lands. At the present time, the copy run is 3,000. Beyond the use of the magazine for our own communication of ideas, we are trying to get better public understanding of our problems by circulating the magazine among the people who derive many benefits from our lands.

We must present our program to the public on a dignified, straight-forward, factual basis, stressing the acts under which we operate and how they affect our plans, operations, and program. Education of the public is perhaps our foremost problem right now.

In our striving for better planning, we should stress the economic analysis of our programs. Especially should we emphasize the manner in which our program is significant to human relations. We should make reports available to the daily press and radio, showing how BLM accomplishments make for better use of the public lands and its resources by the public.

5. What of the future?

As we are now operating, some 90 per cent of our activity is for the future. An organization has normally a greater continuity of life than has any individual in it. At the present time, BLM is a young organization, both actually and in terms of personnel.

Land ownership by the Federal Government will be continued on a large scale, as at present. There is no foreseeable reason to think that there will be a major decrease in Federal land holdings. In looking at the picture of lands under jurisdiction of the BLM, it seems prudent and sensible that we should inaugurate a program to dispose of the many scattered remnants of the public domain east of the Mississippi River. In the West, many isolated tracts probably can be disposed of to the mutual benefit of the Government and of the purchaser. There is no reason to believe that lands in grazing districts, national forests, and O and C districts will be taken from the public holdings of the United States.

There will be increasing demand for use of the Federal lands in the West. The population of the Western States, especially the Pacific Coast States, is increasing at a rate much greater than that of the United States as a whole. This increasing population will increase the demand on public lands for home-sites, recreational sites, and other uses.

Internally, BLM must continue to strive for increased efficiency, better operations, and better planning.

There has been much talk concerning a major reorganization of the land management agencies of the Federal Government, especially BLM and the Forest Service. There is no real likelihood that BLM will leave Interior at this time.

Consolidation of the Federal land management agencies is a prevalent idea among the populace. There are many good points in favor of such a consolidation, but no consolidation is likely at this time. There will continue to be a lot of talk until consolidation is accomplished.

We have come a long way since 1946, but there still is a long way ahead for BLM. We must continue progressively for many years to come. We have a job to do, we have the personnel to do part of it, and we must educate the public so that more appropriations and personnel will be made available to us so that the whole job may be accomplished for the good of the country as a whole.

APPENDICES

GUEST SPEAKERS

LAND PROBLEMS IN THE PHILIPPINES

(And What We Can Learn From Them)

Dr. A. L. Strand
President, Oregon State College

Most of us come from states where land is plentiful. The result is that we are accustomed to taking land for granted, and do not give a great deal of thought to it. In the older countries of the world this is not the case, and we can all learn something from these old countries and the problems which they face. An example of a countrywhere land and land tenure is the number one problem is the Philippines.

At the end of World War II, the United States carried out its promise to give the Philippines their independence. The Filipinos had been led to believe by some of their own people that all of their problems would be solved when independence came. Obviously this was not true. We have learned here (and other examples could be cited) that economic independence must accompany political independence in order for the latter to stand a good chance of success. In order to achieve economic independence, you must have a sound development of economic resources. What is lacking in the Philippines?

In the United States approximately 18 per cent of the population lives on ranches and farms; in the Philippines approximately 80 per cent of the people are absolutely dependent upon agriculture, forestry and fishing. Landlords with large holdings own most of the land. Farmers are continually in debt to them or the Chinese merchants. This pattern of land ownership is typical of Southeast Asia and is a problem over the entire area. The Communists, of course, exploit the situation and do not have too much trouble attracting converts. If the Communists actually came to power, the farmers would have landlords worse than they have ever known, but right now the attitude of many is "What do we have to lose?"

The undesirable pattern of land ownership tends to snowball. The large holders are attracted to invest in land because it is one of the safest places in which to put money. There is competition among the monied class to get title to the small portions of land available for investment, and because the supply is short, the price goes up. The price of land is out of reach for the man who wants to be a farmer. Tendencies in this direction can be found in the United States. We would lose an important foundation to our civilization if our land were owned and run by corporations rather than by the individual farmer.

The conflict in Southeast Asia is a struggle for the good-will of the people. We must do everything we can to help them. Filipinos generally have a very high regard for Americans, largely as a result of the large numbers of American school teachers who have gone to the islands since 1900. It was from this source that the people of the Philippines acquired much of their sense of democratic independence. Now we have the opportunity to help them with our technical knowledge to raise the level of farm production and give the people a sounder economic foundation. Filipinos would make proud farmers if only there were a real future in it for them.

Note: Dr. Strand illustrated his talk with a series of excellent colored slides touching on the history, agriculture, and life of the people. He was a member of a State Department mission to the Philippinesin the summer of 1950, which was for the purpose of helping that country toward the solution of some of its economic problems.

MANAGEMENT

Joseph Rupley
Chief, San Francisco Field Office, Bureau of the Budget

The functions of the four field offices of the Bureau of the Budget were explained, and it was pointed out that they are essentially composed of management men. Why is proper management so important, and what are some of the real management problems?

Proper management in government is vital, and every government employee must do his part. When any American earns a dollar, one quarter of it goes for the support of his government. BLM is included in what is referred to as the "domestic budget", which is roughly 10 per cent of the total budget, and from this 10 per cent must come all of the normal, peacetime services provided by the government. The rest is used for defense activities, veterans benefits, foreign aid, etc. In 1939 the domestic budget was roughly two-thirds of the total budget.

The domestic budget may be inadequate for two reasons: (1) It may fail to give the people all of the services which have been legislated, and (2) It may overlook what the economy is going to be in 10 years without government spending. Business looks to government to provide roads, water development, sewerage disposal, mail service, etc., and without these services it could not prosper or expand, and in many cases it could not continue to exist. This illustrates why it is so important that full value be received by the government on every dollar which it spends on domestic activities, and why every effort should be made to get increased production from present staffs and appropriations.

One way of increasing production is through a sound program of management improvement: finding a simpler and better way to accomplish a given task with the same or less expended effort. BLM has been making good progress in this regard. Another way is by day-by-day practice of good human relations. To illustrate, the best stenographer in the office isn't worth anything the day after a fight with her boy-friend---unless there is the proper feeling for human relations in order to lessen the shock, and unless she knows the goals toward which the office is striving and understands where and why her job is important to the successful attainment of these goals. This Squaw Butte Conference is a good example of human relations, where you meet in shirt sleeves, get acquainted and learn to understand and appreciate each others problems and goals. You can go back to your duty stations and spread this understanding. In other words, human relations is based upon good communications (up, down and across), and this, in turn, is management.

FILMS SHOWN AT SQUAW BUTTE

1. Conservation in Action (Fish and Wildlife Service)
2. Wyoming and Its Natural Resources (Bureau of Mines)
3. Hunting the Puma (Fish and Wildlife Service)
4. Richer Range Rewards (Department of Agriculture)
5. Grassland (Department of Agriculture)
6. Arizona and Its Natural Resources (Bureau of Mines)
7. Alaska, U.S.A. (Alaska Development Board)
8. The Greatest Good (Department of Agriculture)
9. Timber Growing Today (Tennessee Valley Authority)
10. The Valley of the Tennessee (Tennessee Valley Authority)
11. Water in the West (Bureau of Reclamation)

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PARTICIPANTS AND GUESTS

1951 Squaw Butte Conference

In Attendance During Entire Conference

Name	Region	Name	Region
Myron H. Allen	5	William J. Malencik	4
Richard Bauman	3	Otto Metzger	4
Edward C. Booker	1	Lewis T. Miller, Jr.	WO
Max W. Bridge	3	Robert E. Morgan	3
Franklin Bruins	2	Keith E. Norris	4
Arthur E. Calabra	4	Arvin H. Olswold	3
Larry J. Casey	5	Virgil A. Pate	5
Edward D. Cox	3	Harry W. Pearson	5
Norman H. French	3	J. Russell Penny	WO
Thomas R. Hall	2	Clem L. Pope	1
Ralph S. Healy	1	Harry B. Rathner	2
Virgil T. Heath	7	Donald F. Reed	5
Douglas Henriques	4	Roland A. Rush	WO
William B. Kephart	WO	Virgil O. Seiser	WO
L. T. Main	7	Frank A. Ter Bush	1

In Attendance During Part of the Conference

Name	Region	Name	Region
W. James Anderson	1	Herman Lieberman	WO
Dupree Averill	2	Maurice W. March	1
Edwin G. Bailey	1	Fremont W. Meriwether	1
Roscoe Bell	1	Garth H. Rudd	1
Marion Clawson	WO	Chesley Seely	1
Joseph C. Conrace	1	Gwynne Sharrer	2
Charles M. Genaux	WO	Hugh O. Thayer	1
Luther T. Hoffman	2	T. M. Tyrrell	1
Mark Lawrence	1	Robert Whitney	1

Guests

E. William Anderson, Soil Conservation Service
William F. Currier, Soil Conservation Service
Leon C. Hurtt, Forest Service
Joseph Rupley, Bureau of the Budget
Dr. and Mrs. A. L. Strand, Oregon State College

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